CONTRACT JOURNAL

INCORPORATING

THE BRITISH CONSTRUCTIONAL ENGINEER AND THE CONTRACTOR

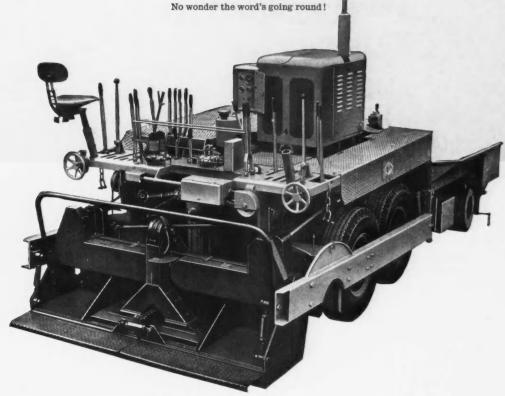
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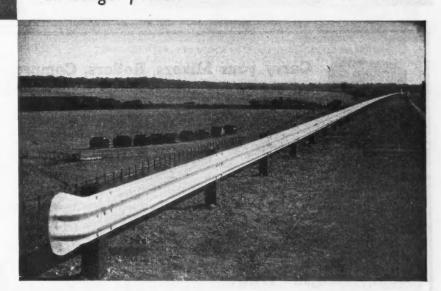
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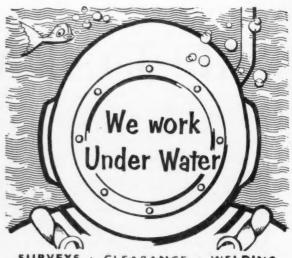
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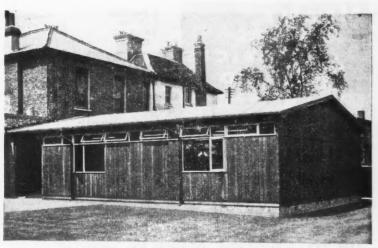
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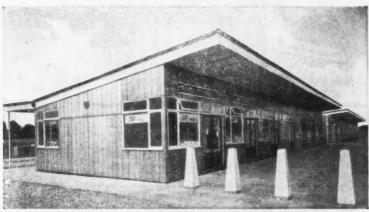
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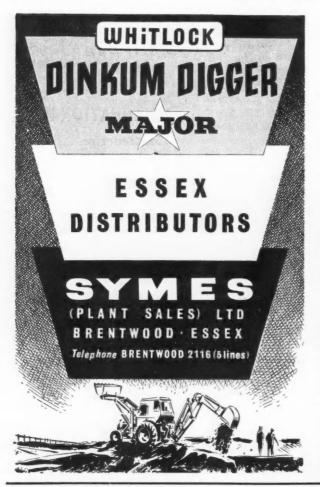
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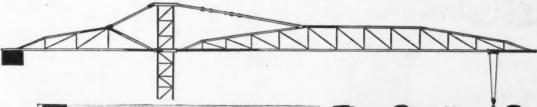
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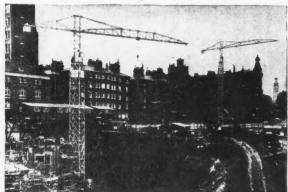
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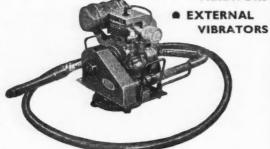
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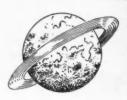


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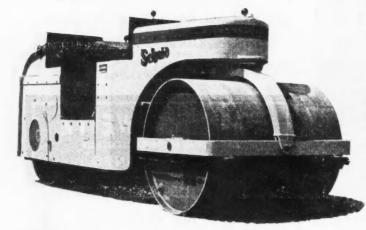
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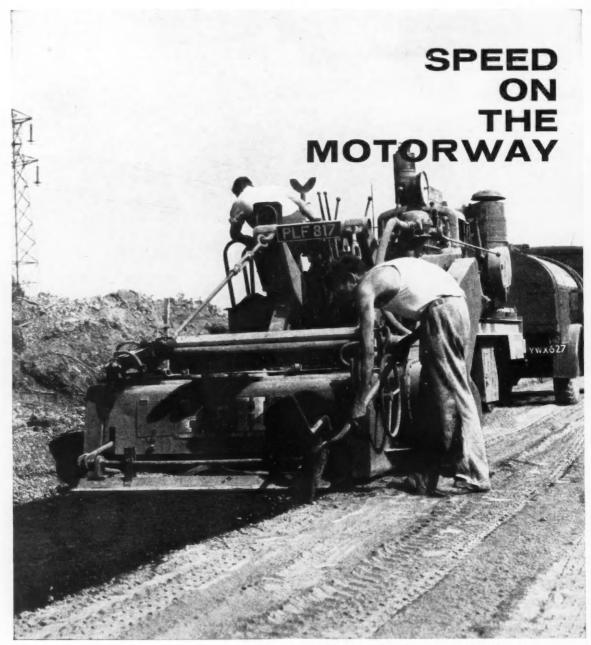
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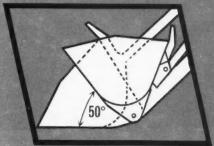
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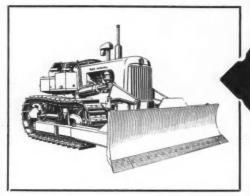


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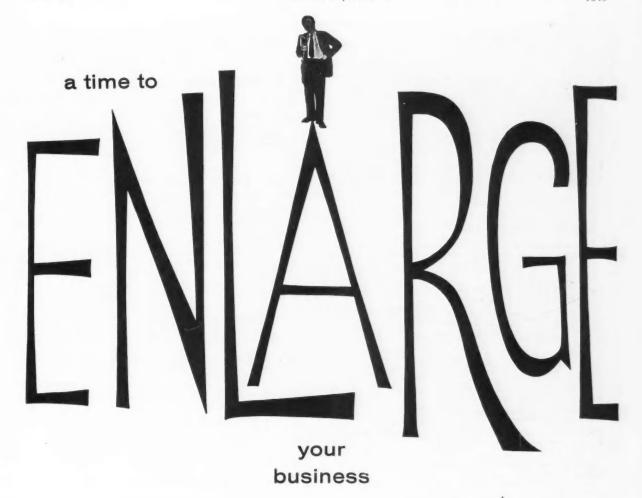
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THE WALLEST WAS ASSETTED ROYSTON-OFFICE: Plene: ROYSTON 3000



The

HYDRAULIC





-a new mixer by Stothert & Pitt

The S & P 7T Hydraulic is a machine which has quickly set new high standards for small tilting mixers. Easily transportable, the 7T Hydraulic produces high quality concrete quickly and at economical cost. Outstanding features of this revolutionary mixer are:—
Patented hydraulic drum transmission gear. Built-in weigh batching mechanism. Fingertip skip control. Meter for accurate water control. Exceptionally high angle skip discharge. High drum discharge. Scoop gear with easily erected jib. Three point support with Ackerman steering. Please write for a fully descriptive leaflet.

Technical Details

Mixed batch capacity=7 cu. ft. Approx. output per 8 hour day at 30 batches per hour=62 cu. yds. Water meter graduated o-10 galls. Hand or semi-automatic operation. Discharge height = 3ft. 6ins. Height of back of skip above ground level-1ft. 3in. Approx. weight of machine (with diesel engine) 35 cwts. Approx. diesel oil consumption per 8 hour day=4 gallons.

The 7T Hydraulic incorporates all the requirements of B.S.S. 1305.



S & P 3 T small tilting



S & P Vibroll 28W power propelled hand guided vibrating roller.

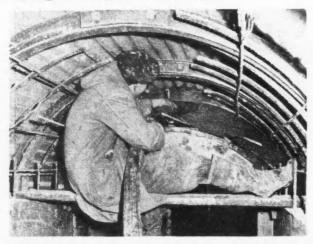


STOTHERT & PITT LTD .

London Office: 38 Victoria Street, S.W.1



CONCRETE



RANSPO



AND SPRAYING through flexible piping!

'LANCY' pneumatic units are more than concrete transporters, they also spray con-

concrete transporters, they also *spray* concrete, and cement mortar over large areas. They handle a small aggregate mix through flexible plastic piping, which enables them to be worked in confined spaces, as when tunnel lining. The 'Lancy' system is a modern, fast, labour saving method of lining tunnels, canal banks, cuttings, reservoirs, constructing arches, walls, floors, etc. It is ancillary equipment to "Placy" pneumatic concrete placers and is available with capacities of 41 cu. ft and $6\frac{3}{8}$ cu. ft. Send for full details.

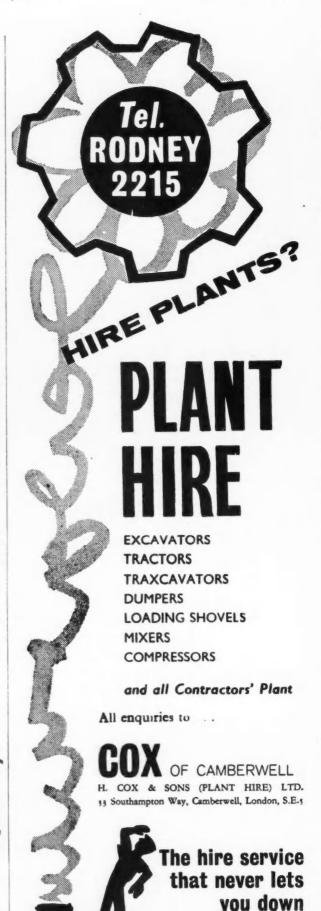
lllustrated (top) The "Lancy" used for tunnel lining (lower top) Spray coating being undertaken at theh Works by J. W. Ellingham, Ltd., Ashford, Kent



Manufactured in Gt. Britain and Distributed by

MACHINERY (CONTINENTAL) LTD.

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SINGLE SOCKET SWIVEL



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Telephone SLOANE 1698 or 7291-2-3 £450

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Offers

£75

£115

£145

£295

£75

£95 £195

£425

SUPPLEMENT

SELECTED ITEMS FROM STOCK:

BATCHING PLANT
20-ton Portasilo, new June, 1956, complete with
corration unit and batch counter. Pullwey, aeration unit and batch counter. Repainted and in first-class condition 14 cu. ft. Road Machines Twin Bucket Swing

Weighbatcher. Checked over, shotblasted and repainted

repainted S.G.M.E. Batching Plant, new 1958, consisting of: two 1½ cu. yd. Mixers with supporting structure; Hopper, Weighbatcher, two 56-ton Silos and electric Elevators; two S.G.M.E. Vibro Finishers; two S.G.M.E. Concrete Spreaders; one S.G.M.E. Vibro Joint Cutter. All in very good condition having been used in one contract only. Full details having been used in one contract only. Full details

shaving seem used in one contract only. Full details and price on application.

SHOVELS AND TRACTORS

Caterpillar No. 6 Tractor Shovel, new 1955, 24 cu. yd. Bucket and Cat. No. 6 Ripper. Recent overhaul, Ripper as new

Caterpillar HT4 Tractor Shovel, 7U Series, fitted with Scarifier and 14 cu. yd. Bucket. Very good.

with Scarifier and 11 cu. yd. Bucket. Very good condition

HD5G Allis Chalmers 11 cu. yd. Tractor Shovel, 1955, reconditioned tracks, excellent condition. Repainted

HD6G Allis Chalmers 12yd. Tractor Shovel, 1957.

First-class condition BTD6 Bullgrader, tracks, sprockets and idlers overhauled and complete with Stirling 3½-5yd. hydraulic Scraper which is as new. Repainted Fowler Challenger Mk. III Angledozer, recent

works rebuild

TOWER CRANES
KTK 42W Schwing Climbing Tower Cranes, new 1959, luffing Jibs, capacity 28cwt. at 100ft. to 55cwt. at 50ft. radius. Can be seen working in Midlands

KTK 28W Schwing Climbing Tower Crane, new and unused, capacity 28cwt. at 66ft. to 55cwt. at 33ft. radius. Lying London area Jules Weitz G.12 Saddle Jib Tower Crane, new 1959, suitable for 22ft. radius rail track, capacity 15cwt, at 52ft. 6in. to 50cwt. at 19ft. radius First-class order, only used on one contract. Buildmaster 150 Tower Crane, new 1953, suitable

for 16ft. radius rail track, capacity 20cwt. at 59ft. to 50cwt. at 23ft. radius.

7cwt. Wickham Mobile, J.A.P. Petrol, c/w platform and masts

7cwt. Wickham Static, Petter Diesel, with masts. First-class condition

10cwt. Wickham Static, Ruston Diesel. Firstclass condition

15/20cwt. B.H.C. Centre-slung Hoist, Petter

Diesel. Overhauled and repainted
Number of Rollover and Bottom Discharge Skips
available. Details on application.

CONCRETE MIXERS 5/3½ Blaw Knox, Winget, Parker, Stothert and Pitt, Petrol, steel or tyred wheels. First-class condi-

tion 10/7 Stothert and Pitt, Petter Diesel, Hopper fed,

10/7 Stothert and Pitt, Petter Diesel, Hopper fed, four steel wheels. Working order 10/7 Stothert and Pitt, Lister Diesel, Hopper fed, four steel wheels. First-class condition each 10/7 Rex, Ruston Diesel, Closed Drum, Hopper fed, four steel wheels. First-class condition 14/10 Rex, Electric, 400-440/3/50, complete with Weighgear, four steel wheels. First-class condition 14/10 Rex, Ruston Diesel, Closed Drum, Hopper fed, four steel wheels.

£195 14/10 Rex, Ruston Diesel, Closed Drum, Hopper fed, four steel wheels. First-class condition £250

GREENHAM EQUIPMENTS LTD.

CLAYTON ROAD, RUISLIP ROAD, GREENFORD, MIDDLESEX

Let's ring VIKING 3651



Hundreds of thousands of gallons for year after year after year

Fix a Sumo to its delivery pipe. lower it into a borehole, pay out its cable after it, connect up and switch on. That's all there is to installing a Sumo, whether you need 100 or 60,000 gallons an hour. Sumos are immune to corrosion, resistant to sandy water, and they can be left for long periods without attention. They are backed by a superbly efficient after-sales service.

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SUMO PUMPS LTD., SCHOMBERG HOUSE, 82 PALL MALL, LONDON, S.W.1 Telephone: TRAfalgar 1954



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SALES & SERVICE TATE OF LEEDS LTD. Leeds Road, Otley, Yorks. Tel. 3361

BRISTOL PLANT HIRE LTD. Bath Road, Bristol 4. Tel. 70321

BERKSHIRE DIGGERS LTD. 75, South Avenue, Abingdon, Berks. Tel. 781 A. GUNN & CO. LTD. Atlantic Street Works, Broadheath, Altrincham, Cheshire. Tel. 2747 HUBERT C. LEACH LTD. 131, High Street, Cheshunt, Waltham Cross, Herts. Tel. 5161



COME TO CRIPPS WITH THOSE TOUGH JOBS

The Scammell 'Sherpa' Dump Truck is designed especially to give dependable service under the severest conditions, whilst retaining light enough unladen weight to allow maximum legal payload on the highway. Spares are readily available.

Obtainable from Cripps—the sole U.K. concessionaires-and backed by Cripps inimitable service, of course. Please write for detailed description and specifications.



THIS MIGHTY TEAM WILL



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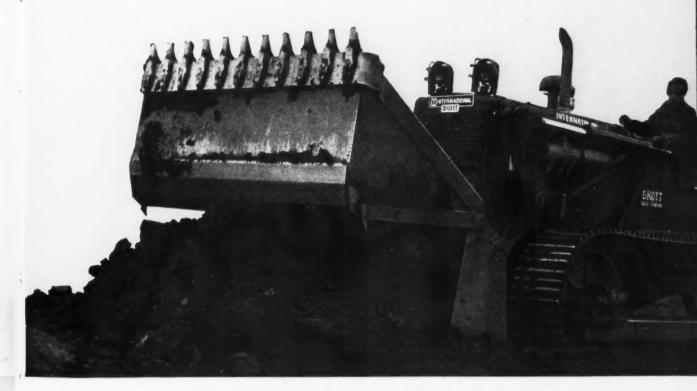
SOLE CONCESSIONAIRES IN THE UNITED KINGDOM

DUMP TRUCKS

The mighty British-built International B-20-K3 Drott Skid Shovel of 3 cubic yards capacity, with standard or "4 in 1" attachment, can tackle the biggest digging, grading, spreading, lifting and carrying jobs. The Tractor, powered by a Rolls Royce 6 cylinder engine of 124 H.P., has exceptional manoeuvrability with six speeds both forward and reverse.



TACKLE THE BIGGEST!



GRIPPS

For Construction Equipment—the finest on tyres and tracks!

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R. CRIPPS & COMPANY LIMITED for I.H. SALES AND SERVICE

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MOBILE SITE OFFICES



Hardun's Mobile Site Offices are in ever increasing demand from the country's leading construction companies. These versatile and robust offices are specially designed to meet the needs of the Public Works Contractor.

Made from finest quality timber and exterior grade plywood, they can be equipped as office or sleeping quarters and supplied in the purchasing company's colours and signwritten if required.





HARDUN'S

PORTABLE TIMBER BUILDINGS are available in a great range of sizes and designs. Send for illustrated literature.

BOROUGH OF YEOVIL. SEWAGE PURIFICATION WORKS-

EXPERIMENTAL PLANT.

The COUNCIL will shortly invite applications from firms wishing to TENDER for the CONSTRUCTION at the Yeovil Sewage Purification Works of the FOLLOWING.

(a) A Experimental Plant consisting of an Aeration Unit in Reinforced Concrete, together with Seven Small Filters 6ft. to 8ft. in diameter, Associated Metering Devices, Pipework, Pumps, and Nine Concrete Settling Tanks 3ft. to 5ft. in diameter.

(b) The Installation of Gas Recirculation Equipmental Plant of the Security of the Securi

J. D. AND D. M. WATSON, MM.I.C.E. 67 Tufton Street, Westminster, S.W.1.

BOROUGH OF EALING.

SUPPLY OF MATERIALS AND EXECUTION OF WORKS FOR 12 MONTHS COMMENCING 1ST APRIL, 1961.

IST APRIL, 1961.

Brooms, Brushes and Paint Brushes: Chandlery, Painters' Sundries and Glazing; Bricks, Pipes and Concrete Tubes; Granite, Concrete Kerb and Paint Brushes; Chandlery, Paving Slabs; Iron Castings and Ventilating Columns; Ironmongery and Tools; Motor Spirit, Lubricating and Fuel Oils; Shingle, Sand and Ballast; Tarred Macadam; and Boots; Coal and Coke. WORKS:

Paving Works: Surface Dressing of Roads and Footpaths; Repair of Asphalt Carriageways and Reinstatement of Trench Openings; Window Forms of Tender, Conditions of Contract, etc., may be obtained, and samples inspected, upon application to the Borough Surveyor, Town Hall, Ealing, W.S. Applications for Tender Forms (by post) must be accompanied by a stamped and addressed envelope (brief size).

Applications by stamped and addresses companied by a stamped and addresses chief size).

Tenders must be delivered to the TOWN CLERK, Town Hall, Ealing, W.5, not later than 12 Noon, SATURDAY, 21st January, 1961.

CITY OF WORCESTER.

ANNUAL TENDERS, 1961/62.

TENDERS are invited for the SUPPLY of the FOLLOWING MATERIALS for the year ending 31st March, 1962:

March. 1962:
(1) Cement.
(2) Concrete Flags, Kerbs, etc.
(3) Crushed Gravel and Sand.
(4) Granite Chippings.
(6) Builders' Sundries.
(7) Painters' Sundries.
(8) Petrol and Fuel Oils.
Specifications and Tender Forms obtainable from City Engineer and Surveyor, 22 Bridge Street, Worcester.
Tenders must be posted to Town Clerk, Guildhall, Tenders to be received not later than 1st FEBRUARY, 1961.

BERTRAM WEBSTER. Town Clerk.

URBAN COUNCIL. KINGSWOOD DISTRICT

KINGSWOOD PARK—CONTRACT 2. SOUTHEY PLAYING FIELD—CONTRACT 3.

Contractors interested in TENDERING for CONTRACT 2. at Kingswood Park, comprising a February Pavilion: and CONTRACT 3, at SOUTHEY PLAYING FIELD, comprising a Sports Pavilion and Public Conveniences and Shelter, are invited to submit their names to me by 2nd JANUARY, 1961. Contractors selected from the list of applicants will be invited to tender.

I. H. DEARNLEY.
Clerk of the Council.

Council Offices, Kingswood, Bristol. 13th December, 1960.

MELFORD RURAL DISTRICT COUNCIL. CONTRACTS REF. 33E2 and 33F2.

GREAT CORNARD AND GLEMSFORD SEWERAGE SCHEMES.

Qualines

Gualines

Gualines

Gualines

Gualines

Gualines

Gualines

Gualines

Gualines

Application forms can be obtained from the
Consulting Engineers, MESSRS, SANDFORD FAWCETT

AND PARTNERS, 53 Victoria Street, London, 5.W.1,

to whom completed froms should be returned not
later than the 9th JANUARY, 1361.

J. A. SHAW,

Clerk of the Council.

Council Offices. Chilton House, Newton Road, Sudbury, Suffolk, 10th December, 1960.

CONTRACTS

CHESHIRE COUNTY COUNCIL.

ROADS AND BRIDGES DEPARTMENT. TENDERS, 1961/62.

TENDERS, 1961/62.

TENDERS are invited from firms who wish to be placed on the County Council's List of Approved to the County Council of the County Coun

B O R O U G H O F L U T O N. ERECTION OF MULTI-STOREY CAR PARK.

Contractors who would be PREPARED to SUBMIT a DESIGN and TENDER for the CONSTRUCTION of a MULTI-STOREY CAR PARK to accommodate not less than 250 cars, and incorporating a Petrol Filling and Service Station, are invited to submit their names and addresses to the BOXOUGH BHOWN 1961. Contractors should indicate the period they would require for design and tendering after receipt of tender documents containing an outline description of basic requirements.

Any information which contractors supply upon work already carried out on similar structures or data collected in connection with multi-storey car parking will assist the Council in deciding from whom Tenders will be invited.

WATEORD CORPORATION WATER

WATFORD CORPORATION DEPARTMENT.

SUPPLY OF SALT FOR WATER SOFTENING PLANT.

TENDERS are invited for the SUPPLY of SALT for base-exchange softening plant regeneration purposes for year ending 31st March, 1962. The Specification and Form of Tender can be obtained on application to the Borough Water Engineer and the specification and Form of Tender can be obtained on application to the Borough Water Engineer and the specific provided of the Town Hall, Watford, not later than 2 p.m. on FRIDAY, 13th January, 1961, and must be sealed in the official envelope provided.

The Corporation do not bind themselves to accept the lowest or any Tender.

GORDON H. HALL, Town Clerk.

Town Hall, Watford,

TROWBRIDGE URBAN DISTRICT

PROPOSED ROAD IMPROVEMENT AT FROME ROAD (A.361), TROWBRIDGE.

(AMENDED SCHEME.)

TENDERS are invited for the ABOVE-MENTIONED WORKS, which extend over a section of road 500yd. in length and which include the following: Widening of Carriageway: Construction of New Kerb and Footpath: Reconstruction of Existing Tootpath Surface was a surface and the section of Existing Tootpath Surface was a surface with the section of Existing Tootpath Surface was a surface with the section of Existing Tootpath Surface was a surface with the section of the Surface was a surface with the section of the Surface was a surface with the section of the Surface was surface with the surface was surface was surface with the surface was surface with the surface was surface with the surface was surface was surface was surface with the surface was surface was

IEUAN EVANS. Clerk of the Council.

Town Hall, Trowbridge, December, 1960.

HATFIELD RURAL DISTRICT COUNCIL.

LEMSFORD SEWERAGE-CONTRACT NO. 8. TO CONTRACTORS.

The above-named Council invite TENDERS for the EXECUTION OF SEWERAGE WORKS, comprising the Yearishing and Laying of about 900vd. of 6in. and 9in. Stoneware and Spun-iron Sewere and 300vd. of 4in. Sewage Elector Station, Manholes, and other appurtenant works.

Contractors desirous of tendering are requested to send their names and addresses to D. BALFOUR AND SONS, MM.I.C.E., 131 Victoria Street, Westminster, S.W.1, together with a cheque deposit of £10 made payable to the Hatfield Rural District Council, not later than TUESDAY, 3rd January, 1961, after which the prevent of all printed documents after the Contract is essential that the contractor shall have had considerable experience in similar works and be prepared to furnish security with an approved society or the fulfilment of the Contract.

The lowest or any Tender will no necessarily be accepted by the Council.

S. F. JAGO.

S. F. JAGO, Clerk to the Hatfield R.D.C.

Council Offices, 16 St. Albans Road, Hatfield, Herts.

CONTRACTS

ISLE OF ELY COUNTY COUNCIL. HIGHWAYS AND BRIDGES DEPARTMENT. COUNTY ROADS.

TENDERS are invited for the SUPPLY of the UNDERMENTIONED MATERIALS and SERVICES during the 12 months ending 31st March, 1962: Tender form

and Application of Binder for Surface

(2)

Supply and Application of Binder for Surface Dressing.
Supply and Delivery of Chippings, etc., for Surface Dressing.
Supply Deliver and Lay Tarmacadam.
Supply, Deliver and Lay Bitumen Macadam.
Supply, Deliver and Lay Dense Bitumen Macadam with Crushed Rock Aggregate.
Supply, Deliver and Lay Fine Cold Asphalt.
Supply and Delivery of Rubble, Spallings, Supply and Delivery of Rubble, Spallings, Premixed Waterbound Macadam (including laying). Single Sized Roadstone and Building Supply and Delivery of Rubble, Spallings, Single Sized Roadstone and Building Supply and Delivery of Rubble.

Sand.

Supply and Delivery of Concrete Aggregates, Binding Silt, Gravel Hoggin, Gravel as raised, Soil Filling, Winter Grit and Sharp Sand.

Sand.
Supply and Delivery of Cationic Bitumen
Macadam.
Supply and Delivery of Bituminous Road
Emu'sion

(11)

(19)

(23)

Supply and Delivery of Cationic Bitumess
Macadam.

Macadam.

Delivery of Bituminous Road
Emu'sion.

Supply and Delivery of Concrete Kerbs and
Paving Slabs.

Providing and Fixing Reflecting Roadstuds.

Laying Plastic White Lines.

Hire of Mechanical Plant.

Gully Cannsing and Mechanical Road
Sweeping.

Hire of Lorries and Tractors.

Supply and Delivery of Road Paint, Tools.

Oil, etc.

Supply and Delivery of Concrete Fencing—
Power of Concrete Fencing—
Chain Link.

Supply and Delivery of Ready-mixed Concrete and Lean-mix Concrete.

Supply and Delivery of Ready-mixed Concrete and Lean-mix Concrete.

Supply and Supply and Laying of Hot Roiled Gravel Asphalt and Sand Carpets.

Supply and Delivery of Salt Glazed Ware

Roiled Gravel Asphalt and Sand Carpets.

Supply and Delivery of Salt Glazed Ware

Pipes and Fittings, Concrete Cylindrical

Pipes and Fittings, and Concrete Porous

Supply, Deliver and Lay Dense Tar

Surfacing. (24)

Pipes.
(25) Supply, Deliver and Lay Dense Tar
Surfacing.
Forms of Tender may be obtained from the County
Surveyor, County Hall, March, Cambs.
Sealed Tenders, in envelope provided, to be received
MONDAY, 23rd January, 1361.

R. F. G. THURLOW, Clerk of the County Council.

County Hall, March. December, 1960. COUNTY BOROUGH OF HALIFAX.

EDUCATION COMMITTEE. ERECTION OF NEW SCHOOL

Applications are invited from general building contractors for inclusion on a list from which will be selected a short list of contractors to TENDER for the ERECTION of the new HOLY TRINITY (CONTROLLED) INFANTS' SCHOOL.

INFANTS' SCHOOL.

SCHOOL STANDING BY CONTROLLED INFANTS' SCHOOL WILLIAM SCHOOL STANDING BY CONTROLLED INFANTS' SCHOOL STANDING BY CONTROLLED IN STANDING BY STANDING BY STANDING BY COUNTY OF NEWCASTLE

CITY AND COUNTY OF NEWCASTLE SCOTSWOOD SUSPENSION BRIDGE REPAIR.

TENDERS are invited from experienced contractors for the REPAIR of the SCOTSWOOD SUSPENSION BRIDGE. The work will include:

(1) Breaking out existing Concrete and Masonry Seatings and Renewing with about 18 cu. yd. of Reinforced Concrete.

(2) Supply, Fabrication and Erection of about 14 tons of new Structural Steetwork.

(3) Same Pitch Pining Stabout 200 cu. tt. of new Pitch Pining Stabout 200 cu. tt.

Copies of the documents and Drawings may be obtained from the Consulting Engineers. Messrs. MOTT. HAY AND ANDERSON. 9 Idesleigh House, Caxton Street, London, S.W.1, on payment of a deposit by cheque of 55, made payable to the City deposit when we be a consultation of the deposit when we have the consultation of the consultat

JOHN ATKINSON. Town Clerk WARMINSTER AND WESTBURY RURAL DISTRICT COUNCIL.

OLD PEOPLE'S BUNGALOWS-BRATTON.

TENDERS are invited for the ERECTION of One Pair of BUNGALOWS for OLD PEOPLE in the Parish of BRATTON. Dacuments obtainable from the Clerk to the Council, Craven House. Warminster, on deposit of a fee of the Council of a bona-fide Tender and the return of the tender occuments.

Tenders to be posted to the Clerk, to arrive not later than MONDAY. 23rd January. 1961.

The Council do not bind themselves to accept the lowest or any Tender. W. LAMBETH.

W. LAMBETH. Clerk of the Council.

Craven House, Warminster, Wiltshire, 19th December, 1960.

SUPPLEMENT

GLOUCESTERSHIRE COUNTY COUNCIL.

COUNTY SURVEYOR'S DEPARTMENT.

TENDERS are invited for the year ending 31st MARCH. 1962, for the FOLLOWING:

(a) Clean Stone, Waterbound Macadam, Coated Chippings, Gravel, Grit, Concrete Aggregates, Sand, etc.

(b) Coated Macadam and Fine Cold Asphalt.

(c) Correcte Logos, Kerbs and Flags.

(d) Concrete Logos, Kerbs and Flags.

(e) Motor Tyres and Remoulding.

(g) Motor Tyres and Remoulding.

(g) Motor Spirit, Derv, Gas Oil and Paraffin.

(h) Surface Dressing for season 1961/62 (approx. quantity 500.000 gallons Tar, 100.000 gallons Bitumen, 3,000,000 sq. yd. Surface Dressing).

(j) Supplying and Laving Plastic White Lines.

(k) Fixing Reflecting Roadstuds.

(k) Fixing Reflecting Roadstuds.

Foundation of the County Surveyor, Quay Street Gloucester, en 2nd JANUARY, 1961, and Tenders verturned by 10 a.m. on MONDAY, 16th January. 1961, marked "Tender 1961/62". Late Tenders Will into be considered Tender 1961/62". Late Tenders Will look of the Council County Surveyor of the Council County Surveyor of the Council County Surveyor of the Council.

COUNTY BOROUGH OF BLACKPOOL. TECHNICAL COLLEGE.

FOOD TECHNOLOGY BLOCK.

The building is part TWO-STOREY, oart SINGLE-STOREY, and approx. 22,000 super. ft. in area. Construction generally is a frame consisting of Precast Concrete Columns, in-situ Concrete Edge and Intermediate Beams, Floor and Roofs; with Brick and Concrete Edge and Intermediate Block Walling of the Concrete Edge and Intermediate Block Walling of the Concrete Edge and Intermediate Block Walling of the Concrete Edge and Intermediate Block Walling of Roofs of Roofs of the Concrete Edge and Intermediate Block Walling of the Concrete Edge and Intermediate Block Walling of the Concrete Edge and Intermediate Block Walling of Roofs of the Concrete Edge and Intermediate Block Walling of the Concrete Edge and Intermediate Concrete Block Walling of the Concrete Edge and Intermediate Block Walling of th

BOROUGH OF HESTON ISLEWORTH. AND

TENDERS are invited for the SUPPLY and DELIVERY of the FOLLOWING:

(a) Tractor.

(b) Trailer.

(c) Trailer.

(d) Tractor.

(e) Trailer.

(e) Trailer.

(f) Trailer.

Further particulars and Conditions of Contract Obtainable from the Parks Superintendent, Parks Office. The Hedges, Lampton Road, Hounslow, Middx. Tenders, complete with Illustrations, Specifications, Prices, etc., enclosed in a sealed envelope endorsed "Tender for —" (as applicable), not indicating the sender, must reach me by 10 a.m., 23rd JANUARY, 1961. "Tender to sender, must reach me by to sender, must reach me by 1961.

The Council are not bound to accept any Tend
The Council are not bound to accept any Tend
Town Clerk.

Town Hall. Hounslow, Middx. O P O U G H O F S L O U G H. BOROUGH

TENDERS are invited for the ERECTION of 236
TRADITIONAL DWELLINGS at PARLAUNT PARK,
Langley.

RADITIONAL DWELLINGS at PARLAUN.

Langley.

Contractors who wish to tender for this work should, not later than Noon on 6th JANUARY, 1961, so inform the BOROUGH ENGINEER, Town Hall, Slough, who will thereupon supply Forms of Tender and Bills of Quantities, with an indication as to the Contract of the

BARNET URBAN DISTRICT COUNCIL. BARNET GATE LANE SOIL AND SURFACE WATER SEWERS.

SEWERS.

The Council invites TENDERS for the LAYING of approx. 3.200 lin., vd. of STONEWARE PIPE SOIL and SURFACE WATER SEWER of 6in., 9in. and 12in. dia., certain lengths of which will be laid with two pipes in one trench, together with Precast Concrete Manholes and other ancillary works.

Conditions of Contract and Drawings may be inspected, and Specification of Works, Bill of Quantities and Form of Tender obtained, on application to the Engineer and Surveyor of the Council. Ravens-and 5 p.m. Wood Street. Barnet, on any day (Saturdays Wood Street.)

Sealed Tenders must be delivered to the undersigned not later than 12 Noon on WEDNESDAY, the 18th January, and marked in the top left-hand corner of the envelope. Barnet Gate Lane—Soil and Surface Water Sewers.

The Council does not bind itself to accept the lowest or any Tender.

ALFRED S. MAYS.

Clerk of the Council.

Municipal Offices, Wood Street, Barnet, Herts. 16th December, 1960.

STOURBRIDGE MAIN DRAINAGE BOARD.

ENVILLE STREET PUMPING STATION FINAL BUILDING CONTRACT FOLLOWING REPLACEMENT OF PUMPING PLANT.

REPLACEMENT OF PUMPING PLANT.

TRIDERS are invited on a fixed-price basis for the COMPLETION of INTERNAL and EXTERNAL BUILDING WORK at the Board's ENVILLE STREET PUMPING STATION, together with the RECONSTRUCTION of a VALVE HOUSE at WHITTINGTON. Contractors wishing to tender should apply for the documents to the Board's Engineers, JOHN H. Contractors wishing to tender should apply for the documents to the Board's Engineers, JOHN H. Description of the Board's Engineers of the Board of the Engineers of the Board of the Board on the Board of the Board.

P. DRURY. Clerk of the Board.

CONTRACTS

BRECONSHIRE

ROADS AND BRIDGES DEPARTMENT. ANNUAL TENDERS, 1961-62.

TENDERS are invited for the SUPPLY and DELIVERY of the FOLLOWING during the financial year ending March 31st. 1962:—

(1) Road Stone and Tarred and Bituminous Macadam.

(2) Road Stone and Tarred and Bituminous Macadam.

(2) Road Stone Dressing Materials only. Including Refined Tar and Tar Compounds, Bitumen for Hot Application, and Cold Good Concrete Pipes.

(4) Road and Footpath Rollers—Hire only.

(5) Concrete Kerbs.

(7) Fencing Materials.

(7) Fencing Materials.

(8) Concrete Kerbs.

(9) Fencing Materials.

(10) Concrete Kerbs.

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CARMARTHENSHIRE COUNTY COUNCIL.

ROADS AND BRIDGES DEPARTMENT.

ROADS AND BRIDGES DEPARTMENT.

The Carmarthenshire County Council invite TENDERS in the UNDERMENTIONED REQUIREMENTS for eyear ending 31st March, 1962:—

(1) Supply of Broken Stone, Chippings, Tar Material at Quarries of Material at Quarries of Material at Quarries to Sites of Work.

(3) Supply of and/or Supply and Application of Refined Tar, Tar Compounds and Cold Bituminous Emulsion. Provides and Plant.

(4) Supply of James Steam Coal.

(5) Supply of Plants.

(7) Supply of Plants.

(7) Supply of Concrete Reps.

(8) Supply of Concrete Flags.

(9) Supply of Concrete Flags.

(10) Hire of Lorries.

(11) Hire of Road Rollers.

(12) Laying by Barber-Greene Spreading and Finishing Machine.

(13) Heating and Planing Road Surfaces.

(14) Heating and Planing Road Surfaces.

(15) Specifications and Forms of Tender may be obtained on the County Engineer and Surveyor, County Hall, armarthen. for the the year (1)

Specifications of the County Engineer and Surveyor, County Engineer and Surveyor, Carmarthen.

Tenders, in plain sealed envelopes, not bearing any name or mark indicating the sender, endorsed "Tender are to be delivered to the undersigned on or before are to be delivered to the undersigned on or before the county of the county county.

S. THOMAS.

Cierk of the County Council.

BOROUGH OF RICHMOND (SURREY). ANNUAL MAINTENANCE CONTRACTS.

ANNUAL MAINTENANCE CONTRACTS.

TENDERS are invited for the FOLLOWING CONTRACTS for the period 1st April, 1961, to 31st March, 1962.—

(a) Maintenance of Highways—Cortways.

(b) Maintenance of Highways—Heating and Planing.

(d) Highways—Heating and Planing.

(d) Highways—Heating and Planing.

(d) Highways—Heating and Planing.

(d) Highways—Heating and Richmond.

Contract documents can be obtained from the Borough Engineer and Surveyor, King's Road, Richmond, Surrey, on application, stating which is required.

Tenders, in the plain sealed envelope provided and Tender for Highways Maintenance Contract.

Tenders, in the plain sealed envelope provided and SATURDAY, 21st January, 1962.

The Council do not bind themselves to accept the lowest or any Tender. CLIFFORD HEYWORTH.

Town Hall, Richmond, Surrey. C I T Y O F C A M B R I D G E. LAMMAS LAND PADDLING POOL.

COLDHAM'S COMMON SWIMMING POOL

COLDHAM'S COMMON SWIMMING POOL.

FIXED-PRICE TENDERS are invited for ONE or BOTH of the FOLLOWING CONTRACTS:

(1) Lammas Land Paddling Pool.—Erection of a Purification Plant House and a Small Sewage Pumping Station of approx. 600

(2) Coldham's Common Swimming Pool.—Erection of a Purification Plant House of approx. 1,100 sq. ft. in floor area: Modification of a Purification Plant House of approx. 1,100 sq. ft. in floor area: Modification of Tender, Specifications and Contract documents may be obtained from the City Engineer and Surveyor, The Guildhall, Cambridge, on payment of Surveyor, The Guildhall, Cambridge, on payment of the prefunded on receipt of a bona-fide Tender.

All documents must be submitted by 3 p.m.,

WEDNESDAY, 25th January, 1961.

The Council is not bound to accept the lowest or any Tender.

ALAN H. I. SWIFT, Town Clerk.

OF SALFORD. SEWAGE DISPOSAL WORKS.

CONSTRUCION OF SUPPLY-LINE TO FILTERS.

CONSTRUCION OF SUPPLY-LINE TO FILIERS.

FIRM-PRICE TENDERS are invited for the ABOVE WORK, which consists of the Construction of 36vd. of Reinforced Concrete Channel and 60vd. of Concrete and Agbestos Pipework, Schedule of Conditions, Bill of Quantities, together with a Form of Tender, may be obtained from, and the Drawing of the work inspected at, the City Engineer and Surveyor's Office, Town Hall, Salford, S.

Firm-price Tenders, sealed in the envelopes provided, which must bear no identification mark, to be delivered to the undersigned not later than 10 a.m. on 9th JANUARY, 1961.

R. RIBBLESDALE THORNTON, Town Clerk.

CONTRACTS

COUNTY COUNCIL COUNTY COUNCIL OF DURHAM.

TENDERS invited for SUPPLY of MICROSCOPES
to NEVILLES CROSS COLLEGE.
Details and Forms of Tender, returnable by 9th
UNIVERSAL STATES OF THE STATES OF T

Shire Hall, Durbam, 19th December, 1960. COUNTY BOROUGH OF EAST HAM.

ANNUAL SUPPLIES.

TENDERS are invited for SUPPLIES and for EXECUTING WORK for 12 months ending the 31st March, 1962 (with the exception of meat, etc., which shall be for six months ending 30th September, 1961), as follows. (Hot Process) and Precoated Granite Chippings.

Disinfectants.
Firewood.
Fuel Oil (Heating).
Funeral Requisites.
Granite (Broken, Crushed and Chippings).
Ice Cream.
Laundry Work.
Meat (including Offal and Sausages).
Milk.
Oilmesusgeolog Rowange and Polishing Mat
Oilmesusgeolog Rowangers etc.)

Meat (including Offal and Sausages).

Milk.
Oilmen's Goods (Cleaning and Polishing Materials, Sweeping Powders, etc.).
Petrol and Fuel Oils (Transport).
Planos—Tuning.
Planos—Tuning.
Salt Glazed Ware Pipes and Fittings.
Salt Glazed Ware Pipes and Fittings.
Salt Glazed Ware Pipes and Fittings.
Tarmacadam, Bituminous Macadam and Cold Asphalt.
Forms of Tender on application, or by forwarding stamped addressed envelope (foolscap size) to Town Clerk, Town Hall, East Ham, E. Post, to be delivered to the Council of th

R. H. BUCKLEY, Town Clerk.

OF BROMLEY. BOROUGH HEATHFIELD ROAD-SURFACE WATER SEWER.

HEATHFIELD ROAD—SURFACE WATER SEWER.

TENDERS are invited, on a Fixed-orice Basis, for CAYING aprox. 300d. of 6 in, and 91n. dia. SURFACE WATER SEWER, with Manholes, Gullies, and other incidental works.

Form of Tender, Specification, Bills of Quantities, and Plans may be obtained from the Borough Engineer, Municipal Buildings, Bromley.

Tenders, in a plain sealed envelope endorsed "Heathfield Road Surface Water Sewer," to be delivered to the undersigned by TUESDAY, 10th January, 1961.

The Council does not bind itself to accept the lowest or any Tender.

LIONEL KAYE.

LIONEL KAYE, Town Clerk.

Municipal Buildings, Bromley. 19th December, 1960.

BOROUGH OF CHELTENHAM.

ANNUAL STORES TENDERS.

TENDERS are invited for the SUPPLY of the FOLLOWING during the 12 months ending 31st March, 1962:—

Item

ender

(C) Castings.
(C) Concrete Flags.
(S) Disinfectants.
(A) Drawing Office Materials.
(H) Concrete of Motor Transport.
(H) Household Goods, etc.
(H) Lead Pipe, Fittings, etc.
(H) Lead Pipe, Fittings, etc.
(H) Printing and Stationery.
(H) Printing and Stationery.
(H) Road Materials.
(H) Tools.
(H) Tools.
(H) Tools.
(H) Glass, etc.
(H) Tools.

(14) Stoneware Pipes, etc.
(14) Tools.
(15) Miscellaneous Oils, Glass, etc.
(16) Zinc and Files.
(17) Petrol, Oils and Grease.
(18) Protective and Uniform Clothing.
Tender Forms (single copies only) may be obtained by sending an addressed envelope or label to the undersigned.
Sealed Forms of the Common Common

W. E. C. BIRD, A.M.I.C.E., Borough and Water Engineer. Municipal Offices, P.O. Box No. 12, Cheltenham. 7th December, 1960.

KINGSTON-UPON-HULL CORPORATION.

ANNUAL SUPPLIES. 1961-62. TENDERS are invited for the FOLLOWING SUP-PLIES for the year commencing 1st April, 1961:— Concrete Flags. Concrete Kerb. Concrete Channel. Concrete Quadrants. Concrete Invert Blocks. Concrete Intermediate Blocks. Concrete Gullies. Cement and Ferrocrete. Sime and Chippings.

Sione and Chippings.
Lime.
Glazed Pipes and Fittings.
Low Temperature Bitumen and Petroleum Asphalitic Cements.
The and Tar Composition.
Gully Grates and Frames.
Manhole Frames and Covers.
Manhole Frames and Co

WILLIAM MORRIS.
O.B.E., M.Inst.C.E., F.R.I.C.S.,
City Engineer

City Engineer's Department, Guildhall, Kingston-upon-Hull.

ST. MARYLEBONE BOROUGH COUNCIL. TENDERS FOR SUPPLIES, ETC.

TENDERS FOR SUPPLIES, ETC.

The Council Invites TENDERS for 12 months commencing 1st April, 1961, for the FOLLOWING: (1) Artificial Stone Paving. (2) Sand and Ballast. (3) Brushes and Brooms. (4) Cement, Lime and Bricks. (5) Coal and Coke. (6) Disinfectant and Liguid Chlorine. (7) Disinfectant and Liguid Chlorine. (7) Disinfectant and Liguid Chlorine. (8) Granite Footway Kerb. (9) Sewer Ironwork. (10) Removal of Old Road Materials. (11) Uniforms. Caps. Boots, and Protective Colonians (12) Petrol. Parafin, Gas Oli, Derv and Heating Oli. (13) Petrol. Parafin, Gas Oli, Derv and Heating Oli. (14) Window Cleaning. Tenders must be made on the official Form of Tender which, together with Specifications, General Conditions and other particulars, may be obtained on application to the Particulars, may be obtained on application to the Town Hall (Room 47), accompapprox. 11in. x Sin. Rates of pay and conditions of labour recognised by Associations of Employers and Trade Unions must be observed. Hence the Control of the Con

BOROUGH OF SLOUGH.

ANNUAL TENDERS.

ANNUAL TENDERS.

TENDERS are invited for the SUPPLY and DELIVERY of the FOLLOWING SUPPLIES from 1st April, 1961, to 31st March, 1962:

Ref. No.

(1) Fine Cold Asphalt and Tack Coat.
(3) Baliast, Hogging, Sand and Shingle.
(4) Stoneware and Concrete Pipes, and Concrete Gulley Pots.
(5) Precast Concrete Kerbs, Flags and Edging.
(6) Cast-iron Manhole Covers and Frames.
(7) Gulley Grates and Frames.
(8) Protective Clothing.
(9) Galvanised Dustbins.
Forms of Tender and details obtainable from Borough Engineer. Town Hall, Slough, Bucks.
Tenders, in plain envelopes endorsed by the TOWN CLERN.
TOWN CLERN. No.

Tenders, in plain envelopes endorsed by the TOWN CLERN.
TOWN CLERN. 1961.

TOWN CLERN. 1961.

SOUTHGATE BOROUGH COUNCIL.

BOROUGH COUNCIL. SOUTHGATE

The Council invite TENDERS for the SUPPLY and DELIVERY of MATERIALS, as under, for the period of 12 months ending 31st March, 1962:

(1) Concrete Flags in Portland Cement.
(2) Shingle, Hoggin, Ballast and Sand.
(3) Tarmacadam and Cold Asphalt.
(4) Blue Bib and Brace Overalis and Jackets.
(5) Petroleum Spirit and Fuel Oil for Central Heating.
(6) Lorry Hire.
Forms of Tender may be obtained from the Borough Engineer and Surveyor, Southgate Town Hall, Paimers Great Great Surveyor, Southgate Town Hall, Paimers Great Great Surveyor, Southgate Town Hall, Paimers Great G

GORDON H. TAYLOR, Town Clerk.

Southgate Town Hall, Palmers Green, London, N.13. December, 1960.

SOWERBY BRIDGE URBAN DISTRICT

REFUSE COLLECTING VEHICLE

TENDERS are invited for the SUPPLY and DELIVERY of a REAR LOADING REFUSE COLLECT-ING VEHICLE, fitted with either compressor or Gravity Packing-type Body, of approximately 10-12 cu. yd. capacity.

Packing-type Body, of approximately 10-12 cu. yd. capacity.

Further details relative to overall measurements of the vehicle bodywork, &c., may be obtained from the Senior Public Health Inspector, Beech Royd, Beech Road, Sowerby Bridge (Tel-Hailfax 81880).

Tenders, in a plain envelope marked "Refuse Vehicle." to be received by me by the 11th JANUARY, 1361.

ALFERD WOMERSLEY.

ALFRED WOMERSLEY, Clerk of the Council.

Alian House, Station Road, Sowerby Bridge.

MIDHURST RURAL DISTRICT COUNCIL. CONSTRUCTION OF CAR PARK AND SEWER-

TENDERS are invited on a fixed-price basis for the CONSTRUCTION of 6.250 so. vd. of CAR PARK, ACCESS ROADS and FOOTWAYS, together with ASESTOS-LEMENT SEWER at GRANGE ROAD, Midburst.

Micharst. Conditions, Specifications, Bills of Quantities. Drawings and Form of Tender may be obtained from the Engineer and Surveyor, Council Offices, Midhurst, upon the payment of £2 2s. deposit, which will be refunded un receipt of a bona-fied Tender. Tenders must be enclosed in a plain sealed envelope, and be delivered to the undersigned by 31st JARUARY, 10 the Council does not bind itself to accept the lowest or any Tender.

D. L. BLAY.

D. L. BLAY, Clerk of the Council.

Council Offices, North Street, Midhurst, Sussex.

CONTRACTS

COUNTY BOROUGH OF HALIFAX. RADNORSHIRE COUNTY COUNTY OF CONCRETE PIPES.

TENDERS are invited at Fixed-price Rates for the STEPPLY and DELIVERY TO SITE at RILEY LANE, Hailfax, of CONCRETE MANHOLE COMPONENTS CONCRETE STATE OF THE PRICE OF T

Halifax, of CONUNEY SPUN CONUNEY, and CENTRIFUGALLY SPUN CONUNEY, total length PIPES 18in., 21in. and 24in. diameters, total length 500yd.

Storett, Halifax, on receipt of One Pound.

Streett, Halifax, on receipt of One Pound.

Tenders to be delivered to the undersigned on or before 13th JANUARY, 1961.

RICHARD de Z. HALL.

Town Clerk.

Town Hall, Halifax.

BOROUGH OF SLOUGH. PARLAUNT PARK HOUSING ESTATE— ROADS AND SEWERS.

TENDERS are invited for the CONSTRUCTION of ROADS and SEWERS on THIS ESTATE, comprising approx. 45,000 sq. vd. of Concrete Carriageway Foundation and Asphalt Base Course Surfacing; 13,000 lin, vd. of P.C. Kerbing; 5,000 lin, vd. of Cast-iron, Concrete and Stoneware Sewers in 91.10 lin. diameters: Manholes, Street Lighting and ancillary works.

Specification, Bill of Quantities and Form of Tender Specification, Bill of Quantities and Form of Tender Course, which will be refunded on receipt of a bona-fide Tender and the return of all documents Drawings and Conditions of Contract may be inspected at the Borough Engineer's Office during normal office hours.

he consider the control of the contr

The Council do not bind themselves to accept the lowest or any Tender.

BOROUGH OF HENDON.

The Borough Council Invites SEPARATE FIXED-PRICE TENDERS for the PROVISION of NEW KITCHENS and other BUILDING WORKS at the POLLOWING COUNTY PRIMARY SCHOOLS:—

(1) Childs Hill, N.W. 2.

(3) Colindale, N.W. 9.

(4) Edgware, Middlesex.
In each case the Form and Conditions of Tender, and Bills of Quantities will be issued by, and Plans may be inspected all the offices of, the Borough Edguments of Sureyor, to whom applications for the above it is desired to Tender, not later than 12th January, 1961. Bills of Quantities will be available for issue an or about the 16th January. Applications in respect of any or all of the above projects must returned on received of a bona-field Tender on the form provided, and not subsequently withdrawn. Cheques should be made payable to Hendon Corporation. Tenders must be received by the 30th JANUARY. 1961 invitation to Tender is subject to certain terms and conditions, particulars of which will be forwarded to each tenderer.

R. H. WILLIAMS, Town Clerk.

Town Hall, Hendon, N.W.4.

THE HAYES AND HARLINGTON URBAN

ANNUAL CONTRACTS, 1961-62.

THE HAYES AND HARLINGTON URBAN DISTRICT COUNCIL.

ANNUAL CONTRACTS, 1961-62.

The Council invites TENDERS for the SUPPLY of the FOLLOWING MATERIALS and SERVICES for the year ending 31st March, 1962:—

(1) Aggregates, Shingle, etc.
(2) Asphalit. Bitumen, Road Emulsion and Cold Asphalit.
(4) Bricks.
(5) Brooms and Brushes.
(6) Bilow No. 1 Gas Mantles.
(7) Classing Materials.
(8) Bilow No. 1 Gas Mantles.
(9) Cement and Lime.
(10) Cleaning Materials.
(11) Clinker, Ashes and Hardcore.
(12) Cleaning Materials.
(13) Commercial Motor Spirit and Fuel Oil (Bulk).
(14) Disinfecting Fluids and Powders.
(15) Dustbins and Food Waste Containers.
(16) Electrical Conduit, Fittings and Accessories.
(17) Electrical Conduit, Fittings and Accessories.
(18) Electrical Conduit, Fittings and Accessories.
(19) Lamp Columns—Cast Iron and Concrete.
(20) Lubricating Oils and Greases.
(21) Medium and Low Voltage Cables.
(22) Lubricating Oils and Greases.
(23) Briss and Sundries.
(24) Salt Glazed Ware Pipes and Salt Glazed Drain Fittings.
(25) Screws.
(26) Srews.
(27) Time Switches (Street Lighting).
(28) Time Switches (Street Lighting).
(29) Tyres and Tubes.
(30) Tubular Steel Posts and Fittings for Traffic Signs and Street Mame Plates.
(31) Hirmon Switches (Street Lighting).
(32) Time Switches (Street Lighting).
(33) Tubular Steel Posts and Fittings for Traffic Signs and Street Name Plates.
(34) Hamilton Street Mame Plates.
(35) Plastic White Road Markings.
(36) Plastic White Road Markings.
(37) Repair of Time Switches (Street Lighting).
(38) Tar Spraving.
(39) Plastic White Road Markings.
(31) Tubular Steel Posts and Fittings for Traffic Signs and Street Name Plates.
(37) Repair of Time Switches (Street Lighting).
(38) Tar Spraving.
(39) Plastic White Road Markings.
(31) Flastic White Road Markings.
(32) Flastic White Road Markings.
(33) Hard of Maintenance of Johns to Concrete Roads.
(34) Handware Central Planuary, 1961.
The Council does not bind itself to accept the lowest or any Tenders and respect the prophibited.
Canvassing in any f

Town Hall, Hayes, Middlesex.

CONTRACTS

COUNCIL.

TENDERS are invited for the UNDERMENTIONED ITEMS for the year ending 31st March. 1962:—

(1) Supply and Delivery of Roadstone and Coated Macadam.

(2) Dressing by Pressure Spraying Machines.

(3) Hire of Barber-Greene Road Surfacing Machine.

(4) Hire of Corries.

(5) Hire of Road Rollers.

(6) Hire of Road Rollers.

(7) Supply of Stoneware. Concrete and Agricultural Pipes.

(8) Cold Emulsion.

Form of Tender and Conditions of Contract may be only of the control of the country control of the country council of the Countr

D. C. S. LANE, Clerk of the Council.

County Hall, Llandrindod Wells, Radnorshire.

FRIMLEY AND CAMBERLEY URBAN DISTRICT COUNCIL.

ROAD SURFACING

ROAD SURFACING.

TENDERS are invited for BURNING OFF EXISTING CARRIAGEWAY and the SUPPLY and LAYING
BY MECHANICAL SHAPE
MYTCHETT ROAD, MYCHEIT.

Copies of the Tender documents may be obtained
from the Engineer and Surveyor, Municipal Buildings,
London Road, Camberley,
Tenders are to be delivered in sealed and endorsed
envelopes to the undersigned not later than First Post
on SATURDAY, the 21st January, 1961.

Iowest or any Tender. K. S. HARVEY,
K. S. HARVEY,
K. S. HARVEY,

K. S. HARVEY, Clerk of the Council.

Municipal Buildings, Clerk of the Council, London Road, Camberley, Surrey, 16th December, 1960. WEST CORNWALL WATER BOARD, HAYLE WATER SCHEME.

CONTRACT NO. 11.

PHILLACK TOWANS RESERVOIR AND PIPELAYING.

PHILLACK TOWANS RESERVOIR AND PIPELAYING.

The Board invite FIXED-PRICE TENDERS from experienced contractors for the CONSTRUCTION of a CONCRETE SERVICE RESERVOIR with a capacity of 150,000 gal ons at Phillack Towans, and Experience of booking states of the construction of the construct

Municipal Buildings, Penzance. Cornwall. 16th December, 1960. WEST CORNWALL WATER BOARD. DRIFT WATER SCHEME.

CONTRACT NO. 7-PIPELAYING.

DRIFT WATER SCHEME.

CONTRACT NO. 7—PIPELAYING.

The Board invite FIXED-PRICE TENDERS from experienced contractors for the FOLLOWING WORK:
CONTRACT NO. 7.—Supplying, Excavating for, works, for about 15 miles of Spun-iron Mains with Flexible Joints, including all Valves and Fittings, as follows:

Section A:
Section A:
About 10,140vd of 10in, dia.
About 2,350vd of 8in, dia.
About 370vd of 10in, dia.
About 370vd of 3in, dia.
About 13,45vd of 3in, dia.
About 1,465vd of 3in, dia.
The General Conditions, Specification, Bill of Quantities and Form of Tender for this Contract, prepared by the Engineers, HERBERT LAPWORTH PARTNERS, 25 Victoria Street, Westminster, S.W.1, may be obtained from the undersigned on or after WEDNES-DAY, the 11th January, 1961, on receipt of a cheque for S. made Bayable to the West Cornwall Water Some—Tenders, together with all documents received, we to the undersigned on receipt of a bona-fide Tender.
Tenders, together with all documents received be enclosed in a sealed cover endorsed "Drift Water Scheme—Tender for Contract No. 7—Pipe-laying," (Section & and & separately), and addressed to the undersigned and delivered not later than 10 only Tenders from firms experienced in this type of work will be considered.
The Board do not bind themselves to accept the lowest or any Tender, and reserve the right to accept separate Tenders for Section A on B, or one Tender in respect of the whole of the work.

E. O. WHEALE,
Cornwall.

Municipat Buildings, Penzance, Cornwall, 16th December, 1960.

COUNTY BOROUGH OF BURTON-UPON-

TRENT.

The CORPORATION invite TENDERS for the SUPPLY of the UNDERMENTIONED MATERIALS for 12 months from the 31st March, 1961, namely:—
(1) Granite Concrete Control of the Contr

SUPPLEMENT

Town Hall, Burton-upon-Trent, December, 1960.

BOROUGH OF STOURBRIDGE.

The TOWN COUNCIL invites TENDERS for the SUPPLY of the FOLLOWING for the 12 months ending Bitumen Coated Slag Macadam. Washed Crushed Gravel. Wetmix. Ready Mixed Concrete. Sand. Concrete Kerb and Concrete Kerb

Ready Mixed Concrete.
Sand.
Concrete Kerb and Flag Paving.
Hot and Cold Asphalt Supplied and or Laid.
Coal and Coke.
Galvanised Dustbins.
Petrol and Derv.
Tyres.
Lorry Hire.
Labour only for Kerbing and Paviors' Work.
Rebristling Mechanical Sweeper Rotary Brushes.
Heating and Planing with Rotary Surface
Tenders, in plain sealed envelopes, endorsed "Tender
for —," addressed to the Town Clerk, The Council
House, Stourbridge, to be delivered by registered post
not later than 12 o'clock Noon on THURSDAY.
19th January, 1961.
The Council Mose, and the surface of the council Council

H. W. MORRIS, B.Sc.(Eng.), A.M.I.C.E.. Borough Engineer and Surveyor.

The Council House, Stourbridge, December, 1960

BOROUGH OF GILLINGHAM.

ANNUAL TENDERS FOR THE SUPPLY OF MATERIALS.

TENDERS are invited for the SUPPLY and DELIVERY of the UNDERMENTIONED MATERIALS for 12 months commencing 1st April, 1961:—

(1) Aggregates for Concrete.
(2) Bitumen Macadam.
(3) Bituminous Tarmacadam.
(4) Bricks—Clay Engineering.
(6) Cast Manhole Covers and Frames.
(7) Cement—Portland and Rapid Hardening.
(8) Coal and Coke.
(9) Cold Asphalt and Precoated Granite Chippings.
(10) Cold Emulson of Bitumen.
(11) Concrete Flags—Precast.
(12) Concrete Street Gullies.
(13) Concrete Street Gullies.
(14) Concrete—Premixed.
(15) Dustbins—Mild Steel.
(16) Electrical Switches and Accessories, Part I.
(17) Electrical Conduit, Part II.
(18) Electrical Wire, Cables and Accessories.
(20) Fencing Posts, Stakes and Rolled Chestnut Fencing.
(21) Fencing Posts, Stakes and Rolled Chestnut Fencing.
(21) Fuel Oil (for Municipal Buildings).

Part III.

(19) Electric Lamps.

(20) Fencing Posts, Stakes and Rolled Chestnut

(21) Fuel Oil (for Municipal Buildings).

(22) Fuel Oil (for Rainham Branch Library).

(23) General Stores (including Hardboards).

(24) Glazed Stoneware Pipes and Fittings.

(25) Granite Chippings.

(26) Full Committee Committee Committee Chippings.

(27) Hired Transport.

(28) Painting Materials.

(29) Petroleum Spirit, Derv, etc.

(30) Rainwater Goods.

(31) Refilling Lacre Sweeper and Collector Brooms.

(33) Rad United Dressing.

(34) Sand Ville Mortar—Dry Mixed.

(35) Szevenging Brooms.

(36) Street Name Plates.

(37) Tyres for Motor Vehicles and Plant.

(38) Scaled Hander Cogether with Specifical Committee Committee

FRANK HILL. Town Clerk.

Municipal Buildings, Gillingham, Kent. 15th December

OF OXFORD.

TENDERS FOR POLICE UNIFORMS.

TENDERS FOR POLICE UNIFORMS.

TENDERS are invited for the SUPPLY Of POLICE UNIFORMS during the financial year 1961-62.

Tenders of the article of the tender of the tenders of the tenders. Oxford, at which address patterns of the garments required may be inspected.

Tenders, enclosed in a plain sealed envelope and marked "Tender for Police Uniforms." must reach me at the address given on the Form of Tender not later than 10.30 a.m. on the 25th JANUARY, 1961.

Tenders, HABEN PLOWMAN.

HARRY PLOWMAN. Town Clerk.

Town Hall, Oxford. 29th December, 1960.

CONTRACTS

COUNTY BOROUGH OF WIGAN. ANNUAL TENDERS FOR MATERIALS, 1961-62.

ANNUAL TENDERS FOR MATERIALS, 1961-62.
TENDERS are invited for the SUPPLY of the UNDERMENTIONED MATERIALS during the financial year ending 31st March, 1962:

(2) Aggregate for Concrete and Building Work.

(3) Pitching Stone.

(4) Tar and Birnhous Compounds for Surface

(4) Tar and Birnhous Compounds for Surface

(5) Coated Macadam.

(6) Cold Asphali.

(7) Dense Macadam Surfacing Materials and Precoated Chippings.

(8) Concrete Flags and Kerbs.

(9) Stone Kerbs.

(10) Concrete Pipes, Manholes and Gully Pots.

(11) Glazed Earthenware Pipes and Fittings.

(12) Concrete Pipes, Manholes and Gully Pots.

(13) Gully Grates and Frames.

(14) Manhole Covers and Frames.

(15) Cement.

(16) Cement.

(17) For Parker Pipes, Manholes and Buildings, Library Street, Wigan.

Tenders, in the envelopes provided, must be received by the undersigned nor later than 10 a.m. on MON-DAY, the 6th of February, 1961.

The Corporation do not bind thetention is drawn to the Council's Standing Orders, a copy of which can be seen at the Borough Engineer's Office.

Municipal Buildings,

Library Street.

Municipal Buildings, Library Street. Wigan.

ADMINISTRATIVE COUNTY OF

The HIGHWAYS COMMITTEE of the LEICESTER COUNTY COUNCIL invites TENDERS for the year ending 31st March 1962, for the FOLLOWING:—

(2) Bitumen Macadam.
(3) Fine Cold Asphalt.
(4) Hot Rolled Asphalt.
(5) Single-sized Roadstone.
(6) Rubble, Spallings, Rejections and Plant Mixed Waterbound Macadam.
(7) Waterbound Macadam.
(8) Ready Mixed Concrete.
(9) Ashes.
(10) Salt Glazed Ware.
(11) Concrete Kerbs. Edgings and Paving Flags.
(12) Concrete Catchpits, Street Guilles and Pipes.
(13) Envises for Mechanical Sweepers.
(14) Chippings for Surface Dressing.
(15) Brushes for Mechanical Sweepers.
(16) Cement.
(17) Petrol, Gas Oil, Derv and Paraffin.
(18) Rolled Mild Steel Bars for Concrete Rein-

Ch.
Brushe.
Cement.
Petrol, Gaid Steen
Rolled Mild Steen
Rolled (28)

BOROUGH OF CHELTENHAM. HAYDEN SEWAGE DISPOSAL WORKS EXTENSIONS

HAYDEN SEWAGE DISPOSAL WORKS EXTENSIONS STAGE 2.

TENDERS are invited from experienced contractors for the CONSTRUCTION in PRESTRESSED and NORTH CONSTRUCTION in PRESTRESSED and Security in Primary and Secondary Sludge Digestion Tanks, 60ft, dia. Sludge Liquo-Pumping Station and Gasholder Raft, together with a Administration Building, Heater House, Roadworks, and ancillary works, and general attendance upon installed therein, Specifications and Bills of Quantities may be obtained from the undersigned on payment of a deposit of £15 15s. (Fifteen Guineas) which will be refunded on receipt of a bona-fide Tender not subsequently withdrawn. A set of Drawings may be provided to the present of the present

BOROUGH OF BURY ST. EDMUNDS. ST. ANDREW'S STREET NORTH

ST. ANDREW'S STREET NORTH.

TENDERS are invited for the CONSTRUCTION and DRAINAGE of the ABOVE CAR PARK.

The work comprises approx. \$0.000 cu. yd. Cut are allowed to the construction of approx. 10,000 cu. yd. Cut are allowed to the construction of approx. 10,000 cu. yd. Cut are allowed to the construction of the constructio

RICHARD R. HILES, Town Clerk.

Borough Offices. Bury St. Edmunds

CONTRACTS

CAMBRIDGESHIRE COUNTY COUNCIL. ROADS AND BRIDGES DEPARTMENT.

SURFACE WATER SEWERS AT SOHAM, CHEVELEY FORDHAM AND BURWELL.

CONTRACT NO. 6019.

TENDERS are invited for the CONSTRUCTION of about 2,500 lin. vd. of SURFACE WATER SEWERS and CONCRETE TUBES, together with Manholes, Gulleys and ancillary works, on FOUR SITES situated Road, Incombain, and Low Road, Burwell, Cambridge-shire.

Shire.

The Contract is divided into four parts, and Tenders for work at each of the four sites will be considered

for work at each of the four sites will be considered separately.

The Specification. Bills of Quantities, Drawings and The Specification will be obtained from the County Surveyor, Shire Hall. Castle Hill. Cambridge Tenders. In the envelope provided, are to be delivered to the undersigned not later than 9.30 a.m. on SATURDAY, 14th January, 1961.

The Council do not bind themselves to accept the lowest or any Tender, and may accept Tenders for work at one or more sites only.

charles PHYTHIAN,
Clerk of the Council. Shire Hall,
Castle Hill,
Cambridge,
December, 1960.

O II G H OF GUILDFORD.

BOROUGH

FIXED - PRICE TENDERS are invited for the CONSTRUCTION of the ABOVE NEW DEPOT. Involving Building and Civil Engineering Work for Five Buildings with Steel Frames (Steelwork Subcontractor nominated). Access Roads and Yards, etc. Details and documents from Borough Engineer and Details and Detail

HERBERT C. WELLER.

Municipal Offices, High Street, Guildford.

DISTRICT COUNCIL OF

CONVERSION OF NO. 65 CORBYN CRESCENT

FIXED-PRICE TENDERS are invited for the CONVERSION of No. 55 Corbin Crescent into TWO SELF-CONTAINED FLAT.

The Conditions of Contract may be inspected, and the Drawings. Specifications and Form of Tender may be obtained at the Office of the Surveyor to the Council. MR. W. H. FRASER, M.I.Mun.E., at St. Wilfrid's. Ham Road, Shoreham-by-Sea, Sussex, Tenders may be delivered to the undersigned, in a plain sealed envelope bearing no indication or mark as to the name and address of the sender, to arrive not later than 9 a.m. on the 9th JANUARY, 1961. The Council does not undertake to accept the lowest or any Tender,

R. H. DAVIES. Clerk of the Council

CUCKFIELD RURAL DISTRICT COUNCIL. CONTRACT NO. 151.

CONSTRUCTION OF FOOTWAYS AND PREPARATION OF MARGINS, ETC., AT COVERT MEAD, HANDCROSS.

TENDERS are invited for the CONSTRUCTION of approx. 430 sq. yd. of CONCRETE FOOTWAY, 360 lin. yd. of Kerbing, 1,200 sq. yd. of Tarcarpet, and other incidental works at the ABOVE SITE.

Specification, Bills of Quantities and Form of Tendermay be obtained from, and the Drawings can be may be obtained from, and the Drawings can be the control of the co

J. A. CHURCHILL, Clerk of the Council. Rural Council Offices, Bo'tro Road, Haywards Heath, Sussex. 19th December, 1960.

CHELMSFORD RURAL DISTRICT

DANBURY AND OTHER PARISHES SEWERAGE SCHEME.

BOREHAM SECTION-STAGE I.

BOREHAM SECTION—STAGE I.
CONTRACT NO. 1.

The Council invites FIXED-PRICE TENDERS for the ABOVE CONTRACT, comprising about 775vd. of 7in. and 9in. dia. Giazed Stoneware Sewers, 3.500vd. of 10in. dia. Bitumen Sheathed Spun-iron Rising Main, and Main Sewage Pumping Station in Reinforced Control of the Council's Consulting Annual Sewage Pumping Station in Reinforced ancillary works.

Drawings may be inspected at the Offices of the Council's Consulting Engineers, MESSRS. LEMON AND BLIZARD, 95 Tutton Street, Westminster, 5.W.1, and at the Engineer and Surveyor's Office. London Road, Chelmsford.

Tender documents may be obtained on or after the Consulting Engineers on payment of a deposit of £5 by cheque made payable to the Chelmsford Rural District Council The deposit cheque will be returned on receipt of a bona-fide Tender which is not subsequently withdrawn.

Tenders, together with the Bill of Quantities fully priced in ink, are to be returned to the undersigned, in a sea'ed envelope bearing no mark or indication of the Council does not undertake to accept the lowest or any Tender.

C. A. BOHANNON, Clerk of the Council.

Council Offices,

SURREY COUNTY COUNCIL. HIGHWAYS AND BRIDGES DEPARTMENT.

TENDERS are invited for the SUPPLY of the UNDERMENTIONED MATERIALS and SERVICES for 12 months commencing 1st April, 1961:—

Materials and Services

No.
(1) Cement.
(2) Refined Tar.
(2) Refined Tar.
(3) Bitumen Emulsions.
(5) Broken Granite.
(6) Broken Granite.
(7) Crushed Siap for Tar and Bitumen Macadam.
(8) Concrete Plees and Gullies Edginas.
(9) Process Granite.
(10) Granite.
(11) Granite.
(12) Tar and Bitumen Macadam and Granite.
(12) Tar and Bitumen Macadam and Gravel and Cold Asphalt.
(13) Granite.
(14) Granite.
(15) Mechanical Haulage.
(16) Lean-mix and Ready Mixed Concrete.
(17) Traffic Signs and Road Danger Lamps.
(18) Plastic White Lines.
(19) Surfacing Carriageways with Filled Bitumen and Dry Stone Chippings.
(20) And Dry Stone Chippings.
(21) Heating and Planing Grass Cutting (Guildford and Bagshot Rural Districts).
(21) Heating and Planing Road Surfaces.
(22) Fixing Catseve Reflecting Studs.
(23) Forms of Tender. General Conditions and Specification obtainable from County Engineer and Sectional Control of Tender.
(24) And Catsella County Engineer and County Applications for documents must state the serial number of the forms required.

A N C A S H I R E COUNTY COUNCIL.

ANCASHIRE COUNTY COUNCIL.

TENDERS are to be invited from selected firms for CONSTRUCTION of Two HARD TENNIS COURTS (C., at PRESCOT GIRLS GRAMMAR SCHOOL. Applications for documents to Hender must be received by the COUNTY of the CONSTRUCTION of the CONSTRUCTION of the CONSTRUCTION of the CONSTRUCTION of the COUNTY of the

SOUTH PARK SCHOOL—
KITCHEN VENTILATION—SUPPLY AND ERECTION
OF COMPLETE EXTRACTION PLANT.

Applications are invited from registered ventilation engineers to TENDER for the ABOVE-MENTIONED CONTRACT.
The works consist.

engineers to TENDER for the ABOVE-MENTIONED CONTRACT.

The works consist of Supply and Erection of Glazed Hoods with Branch Ducting, Extract Units and Vertical Ducting to Roof Level with Weather Cowls, exclusive of builders' work. Pelative documents may Conditions of Councillance of the BOROUGH ENGINEER AND SURVEYOR, Town Hall, Illiord, from whom the Specification, Bills of Quantities, Drawings and Forms of Tender may be obtained upon payment of \$2 2s\$. Which will be refunded on receipt of a bona-fide Tender and all documentsed to the undersigned not affect the council do not bind themselves to accept the lowest or any Tender.

CITY OF MANCHESTER.

CITY OF MANCHESTER.

TENDERS invited for ALTERATIONS to CROSSLEY

STREET CANTEEN. GORTON.
Bill of Quantities from CITY ARCHITECT, P.O.
Box 488, Town Hall.
Tenders returnable by FEBRUARY 1st.

For Contracts received too late for classification see page 1657

APPOINTMENTS VACANT

LAGOS EXECUTIVE DEVELOPMENT

ENGINEER APPOINTMENT.

ENGINEER APPOINTMENT.

APPLICATIONS are invited for the UNDERMENTIONED POST:

Three Engineers Group 6). Salary according to
engineers and qualifications within the
grade £1.380 per annum, rising, subject to
satisfactory service, by annual increments of
£50 to £1.608, together with £300 per
annum inducement allowance for expatriate
officers of the preparation of
energy of the preparation of
energy of the preparation of
supervising schemes and seeing them through
from start to finish. Qualifications: Candidates must be at least 25 years of age and
be corporate members of either 1.C.E. and
dates must be at least 25 years of age and
be corporate members of either 1.C.E. and
professional experience.

The appointments will be on contract for tours of
approximately 18 months, renewable by mutual agreement and the contract will be on contract for tours of
approximately 18 months, renewable by mutual agreement and the contract of the preparation of of the provided from the Commistoner with the rivers and
contribute 10 per cent, of this basic salary to the
Board's Provident Fund, and to this the Board will provide
provided for officers, together with their wives and
children, and facilities exist for children to visits
allowances are, in addition, payable at the rate of
c75 a year whist the children are maintained in
England. Full details of conditions of service and
application forms for the above appointment may be
obtained from the Commissioner for Nigeria, Nigeria,
One copy to the Nigeria Hous; (address as above).

30th JANUARY, 1980
30th JANUARY, 1981
30th JANUARY, 1981
30th JANUARY, 1981
30th JANUARY, 1981
30th

APPOINTMENTS VACANT

GLOUCESTERSHIRE COUNTY COUNCIL. APPOINTMENT OF CLERK OF WORKS.

APPOINTMENT OF CLERK OF WORKS.

APPLICATIONS are invited for the APPOINTMENT of CLERKS OF WORKS on temporary staff to supervise the erection of extensions to Gloucestershire Training College of Domestic Science, which will include three mew hostel blocks.

We have the training contracts of construction and applications, stating age, experience, present position and salary, together with names and addresses of two recent employers to whom reference may be made, to reach County Architect, Shire Hall, Gloucester, by 7th LAW DAY OF Clerk of the County Council.

BOROUGH ENCHANGED AND STREAM OF THE LD.

BOROUGH ENGINEER AND SURVEYOR'S

APPLICATIONS are invited from suitably qualified persons for the POST of ENGINEERING ASSISTANT, A.P.T. IV (£1,140-£1,310) pius London Weighking. The commencing salary to be fixed at a point within the Scale commensurate with qualifications and experience.

The successful applicant will be engaged on a relighting scheme for the Borough, estimated to cost £1sm.

relighting scheme for the Borough, estimated to cost £1sm. Housing accommodation may be made available in appropriate cases. The Council is also prepared to consider 100 per cent. advances to successful applicants for house purchase within the Borough. Saturday mornings are normally free from duty. Application Forms, obtainable from H. D. PEAKE, M.Sc.(Eng.), M.I.C.E., Borough Engineer and Surveyor, 7 Little Park Gardens, Enfield, Middlesex, must be delivered to the undersigned as soon as possible.

CYRIL E. C. R. PLATTEN. Town Clerk.

Public Offices, Gentleman's Row, Enfield, Middx.

OROUGH OF ENFIELD. BOROUGH

BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT.

APPOINTMENT OF JUNIOR ENGINEERING

ASSISTANT.

APPLICATIONS are invited for the ABOVE PERMANENT APPOINTMENT at a salary in accordance with Grade A.P.T. I of the National Scheme of About the Author of Service (£645-£815 p.a.), with the addition London Weighting of £15-£40 p.a., according to the Author of About the About

experience.

Applicants should have completed their professional realizations and experience.

Applicants should have completed their professional training under the Scheme for the training of Municipal or Civil Engineers. Opportunity will be afforded to the complete of the professional state of the pro

CYRIL E. C. R. PLATTEN. Town Clerk. Public Offices, Enfield, Middx.

CITY OF SHEFFIELD. DEPUTY GENERAL MANAGER, PUBLIC WORKS DEPARTMENT.

DEPUTY GENERAL MANAGER. PUBLIC WORKS DEPARTMENT.

APPLICATIONS are invited for the APPOINTMENT of DEPUTY GENERAL MANAGER OF THE PUBLIC WORKS DEPARTMENT of the Corporation. on the WORKS DEPARTMENT of the Corporation. on the Corporation of the Corporation properties, the Corporation of the Corporation properties, the Corporation properties, the Corporation properties, the Corporation properties, the Corporation properties of the Corporation properties of the Corporation and the Corporation of the Corpora

KINGSTON UPON HULL EDUCATION

APPOINTMENT OF RESIDENT ENGINEER FOR THE ERECTION OF THE DAVID LISTER HIGH SCHOOL. KINGSTON UPON HULL.

APPLICATIONS are invited from suitably qualified men for the POST of RESIDENT ENGINEER for the erection of the David Lister High School, Kingston upon Hull. This new comprehensive school, which will provide accommodation for 1.440 pupils and is estimated to cost about £517.000, is being designed by marked to cost about £517.000, is being designed by AND PARTNERS, of London, as Consulting Endicated Architects. O'NOS, ISRAEL ANST £1LIS. Chartered Architects, o'O'NOS, ISRAEL ANST £1LIS. Charter

S. W. HOBSON, Chief Education Officer.

APPOINTMENTS VACANT

BRITISH TRANSPORT WATERWAYS.

TECHNICAL BUILDING ASSISTANT REQUIRED for Estate Department at Watford, Herts. Knowledge of building construction methods and maintenance. Ability to survey, prepare specifications and drawings, estimate costs and supervise works of maintenance and new structures. Knowledge of Building Acts. By-laws and housing grants essential manual content of the property of the second property of the

COUNTY SURVEYOR'S DEPARTMENT.

ASSISTANT ENGINEER (DEVELOPMENT CONTROL),

APPLICATIONS are invited for the POST of ASSISTANT ENGINEER (Development Control) in the Headquarters Office at Taunton.

Some Kindle of Country Planning Country Pla

County Hall, Taunton.

COUNTY BOROUGH OF EAST HAM. SENIOR ASSISTANT ENGINEER (GENERAL), A.P.T. IV (£1,185-£1,355). PRINCIPAL ASSISTANT ENGINEER (STRUCTURES), A.P.T. V (£1,355-£1,525).

Salaries in excess of the minima may be baid according to qualifications and experience. Subsistence to the persons appointed if unable to obtain suitable housing accommodation, necessitating the maintenance of two homes.

Further details and application forms, returnable by 13th JANUARY, 1961, from the TOWN CLERK. TOWN Hall, E.6.

METROPOLITAN BOROUGH

CLERK OF WORKS REQUIRED for extensive new housing scheme. Salary in A.P.T. II (£815-£960) or according to experience and qualifications of successful candidates.

Experience in the erection of tall blocks of flats and layout of estates is essential. Particulars and Application Forms obtainable from Commetce from returnable by Noon, 16th JANUARY, 1961.

BOROUGH OF AYLESBURY.

NEW SEWAGE PURIFICATION WORKS. APPOINTMENT OF CLERK OF WORKS.

APPLICATIONS are invited for the ABOVE APPOINTMENT at a salary in accordance with Miscellaneous VI (£760-£825 per annum) in connection with the construction of a new purification works, comprising reinforced concrete grit channels studge digestion tanks, biological filters, humus tanks, sludge digestion tanks and drying beds, pumping station, office the student of the Consulting Engineers, MESSRS. J. D. and D. M. WATSON. MM.I.C.E. 67 Tufton Street, Westminster, London, S.W.1.

The Scheme of Conditions of Service London,

MMM.I.C.E., 67 Tufton Street, Westminster, London, S.W.1.

The Scheme of Conditions of Service laid down by the National Joint Council for the Miscellaneous Classes of Officers will apply to the appointment. Supported to last approximately 12 months, and will be terminable by one month's notice on either side. Applications should apply in writing to the undersigned not later than 6th JANUARY, 1961 to should give full particulars of age, qualifications and seperience, together with the nasses salifications and seperience, together with the nasses salifications and the support of age, qualifications and support of the nasses salifications a

Town Hall.
Aylesbury.
Buckinghamshire.
December. 1960.
O II G H OF AYLESBURY.

BOROUGH

APPOINTMENT OF ASSISTANT RESIDENT ENGINEER.

APPLICATIONS are invited for the ABOVE APPOINTMENT to assist the resident engineer in the supervision of the construction of a new purification works, comprising reinforced concrete grit channels, studge digestion, tanks and dryling beds, pumpling station, office block, and incidental works. The contract is under the direction of the Consulting Registers, MESSRS, J. D. and D. M. WATSON, MM.I.C.E., 67 Tufton Street, Westminster, London, S. The salars will be \$6.000.

Engineers, MESSRS, J. D., and D. M. WATSON, WM.I.C.E., 67 Tutton Street, Westminister, London, S.W. Westminister, London, Lo

R. D. W. MAXWELL. Town Clerk.

Town Hall, Aylesbury, Buckinghamshire, December, 1960.

December, 1960.

CONTRACTS MANAGER REQUIRED for Southern Area of England, Applicants must be qualified and conversant with major road projects, including Ministry of Transport Specifications. Good salary. Car provided. Pension scheme, and directorship after proven period.—Write Box V.3259, "The Contract Journal."

APPOINTMENTS VACANT

SUPPLEMENT

FLINTSHIRE COUNTY COUNCIL.

APPLICATIONS are invited from suitably qualified and experienced persons for the APPOINTMENT of PRIVATE STREET WORKS ASSISTANT in the Country Streety's The Programment, Mold. Salary Act. This streety are the salary and the salary a

COUNTY BOROUGH OF EAST HAM.

ENGINEERING ASSISTANT, A.P.T. I OR II. SALARY UP TO £1,000 PER ANNUM, ACCORDING TO QUALIFICATIONS.

A subsistence allowance may be granted over a reasonable period to the person appointed if unable to obtain suitable housing accommodation, necessitating the maintenance of two homes.

Further details and application forms, returnable by 13th JANUARY, 1961, from the TOWN CLERK, TOWN Hall, E.6.

CASHIERS. TIMEKEEPERS and STOREKEEPERS REQUIRED for overseas contracts. Single quarters only available. —Write full particulars to Box V.3219, "The Contract Journal."

HOLLAND & HANNEN AND CUBITTS (GREAT BRITAIN), LTD.

REQUIRE SENIOR SITE ENGINEERS in the main building department, for work in the London and Essex areas. The appointments carry responsibility and will be of particular interest to men with a keen approach to modern techniques and methods and who approach to method to the technique and analysis work. Those applying should be fully experienced in concrete control and mix design. Superannuation, bonus and other staff benefit schemes are in operation.—Applications, which will be treated in strictest confidence, should be made to:

Personnel Manager (CJ/K8874), HOLLAND & HANNEN AND CUBITTS (GREAT BRITAIN), LTD., 1 Queen Anne's Gate, London, S.W.1.

ENGINEER/AGENT REQUIRED for major roadworks in Greater London area.—Write, stating age, experience, and salary required, to Box V.3251, "The Contract Journal."

CLERK OF WORKS REQUIRED for the estates surveyors' office of PYE, LTD. Duties will include the supervision of new factory projects and other industrial buildings.—Write, stating age, experience, and salary required, to the Personnel Officer, Pye, Ltd., St. Andrew's Road, Cambridge.

SITE ENGINEERS REQUIRED for drainage and sewage works contracts in the North of England. Able to work on own initiative, do interim measurements, and fully experienced and accurate in setting-out.—Write, stating salary required, age and experience, to Box V.3261, "The Contract Journal."

ENGINEERS

Civil engineering contracting, overseas. Applications for site engineering posts on a large overseas contract are invited from ENGINEERS having at least five years site experience. The work is varied and interesting, and the climate is pleasant. Two-year tours good prospects for assistant engineers with drive and a sound technical and commercial background.—Write, astung training, experience, age and marital status, to:

BOX V.3128, "THE CONTRACT JOURNAL."

PLANT HIRE REPRESENTATIVE, for West Midland area, REQUIRED by nationally known company. Vacancy is due to promotion within sales organisation, and unlimited scope is offered to a man of integrity who can maintain high sales record and who possesses the necessary drive and ambition for advancement. — Write Box V.3227, "The Contract Journal."

Senior and Junior site Engineers Required for building and civil engineering contracts in building and civil engineering contracts in England. Must be experienced in the use of surveying instruments and capable of controlling engineering construction.—Applications, giving details of experience, age, and salary required, to the Chief Structural Engineer, Tersons, LTD., Dollis Park, Finchley, London, N.S.

London, N.3.

SITE AGENT and GENERAL FOREMAN REQUIRED
for building contract in Eastern Counties. Applications invited from first-class and experienced men.
Write, giving full details of past experience, and salary required, to Box 1013, c/o Murray and Phelan, Ltd., Columbia House, Aldwych, London, W.C.2.

AGENT

REQUIRED, in first instance for interesting as challenging main sewer contract, including part tunnel, at Bury St. Edmunds, Suffolk. A permane situation with a progressive firm.—Applicants show send full details of education, training, experien and salary required, to:

F. W. SHANKS, LTD., Building and Civil Engineering Contractors, Hunstanton, Norfolk.

SITE AGENT REQUIRED for large multi-storey building contract about to commence in the London area. Applications invited from firt-class and experienced men.—Write, giving full details of past experience, and salary required, to Box 1014, c/o Murray and Phelan, Ltd., Columbia House, Aldwych, London, W.C.2.

GENERAL FOREMEN REQUIRED for large building contract in the Suffoik area. Applicants must be first-class and experienced men.—Write, giving tull details of experience and salary required, to Box 1016, c/o Murray and Phelan, Ltd., Columbia House, Aldwych, London, W.C.2.

DERSONNEL OFFICER WANTED by building contractors. Must have held similar position, but necessarily in the building industry. Employees number 1,000. Pension scheme.—Write, with fullest information and state salary ruguired, to Box V,3262. "The Contract journal"

APPOINTMENTS VACANT

OVERSEAS CONTRACTS. — Several experienced MANAGER / CASHIERS REQUIRED: Single quarters only available.—Write full particulars to Box V.3260, "The Contract Journal."

A SSISTANT BUILDING SUPEYOR/DRAUGHTS-MAN REQUIRED for W.1 property company. MANAGER COMPANAGER CASHIERS SEVEN COMPANAGER COMPANAGER

ROAD SURFACING CO., LTD.

REQUIRE MANAGER for their asphalt and bituminous surfacing department.—Applications, in writing, stating experience and qualifications, which will be treated in strict confidence, should be addressed to:

The Secretary, ROAD SURFACING CO., LTD., 241 Hagley Road, Birmingham, 16.

NIGERIA.—ASSISTANT ENGINEERS, single and preferably qualified, REQUIRED for a 15-months four in Nigeria with an established civil engineering concern. Qualities expected are initiative, character and good health, attractive prospects for young men with ambition to work overseas.—Written applications, in confidence, giving particulars of age, education and experience to date, to HARBOUR AND GENERAL WORKS, 173 St. Stephen's House, Victoria Embankment, Westminster, S.W.1.

Embankment, Westminster, S.W.1.

SOIL MECHANICS. — Civil engineering company
REQUIRES young and single SOIL MECHANICS
ENGINEER for road construction work in West Africa.
Good experience in soils testing procedure essential.
8 months' contract, with three months' paid home leave. Free passage and accommodation.—Please give full particulars of previous experience and salary required to Box V.3265, "The Contract Journal."

EXPERIENCED ENGINEER REQUIRED as AGENT for large overseas contract. Applicants should be over 40 years of age and should have had considerable experience in running large and complex Jobs. Write full details of career to Box V.3176, "The Contract Journal."

CORE DRILLING AND GROUT INJECTION

FOREMAN REQUIRED for large contract, Sot Yorkshire, commencing January, Previous experier in charge of this class of work essential. Permanstaff appointment. Pension scheme.—Applications, confidence, quoting Reference SC182, to:

Contract Labour Department, SIMON-CARVES, LTD., Bird Hall Lane, Cheadle Heath, Stockport.

EXPERIENCED GENERAL FOREMAN REQUIRED for large overseas contract. Applicants must have good all-round experience and should have held previous positions as General Foreman on large jobs. Write full details of experience to Box V.3177, "The Contract Journal."

"The Contract Journal."

J. CASE CO., LTD., REQUIRE First-class DEMONJ. STRATOR, fully experienced on wheeled and crawler industrial tractors, to operate from their new depot at Stanningley, near Leeds, and be fully mobile. All applications, which will be treated in absolute confidence, should be sent to the Sales Manager, J. Case Co., Ltd., Mill Road, West Drayton, Middx.

SENIOR AGENT REQUIRED by expanding firm of civil engineering contractors. With proved ability on contracts of £200,000 or over. This is a permanent staff appointment, with pension rights and good renuneration.—Written applications, stating age, experience, and salary required, to 8ox V.3281, "The Contract Journal"

Ine Contract Journal."

SITE QUANTITY SURVEYOR REQUIRED for work on civil engineering contract at Hunterston Nuclear Generating Station, Ayrshire. Age approx. 21 to 30 years. Should have previous site experience and knowledge of Standard Method of Measurement, Applications, giving details of age, experience and qualifications, to Contract Labour Department, SIMON-CARVES, LTD., Cheadle Heath, Stockport, quoting Ref. Q.S.190.

SENIOR AGENT

Due to the continual expansion of their civil engineering department, SIR LINDSAY PARKINSON AND CO., LTD., have a vacancy for a SENIOR AGENT. Applicants must be qualified engineers with extensive experience as agents on major civil engineering projects. Permanent and progressive appointment with high salary to suitable applicant. Superannuation scheme.—Reply, in confidence, to:

Mr. F. V. Osborne, M.I.C.E., M.I.Struct.E., SIR LINDSAY PARKINSON AND CO., LTD., 6 Lambeth Road, S.E.1.

MAINTENANCE FITTERS REQUIRED. Fully experienced in quarry machinery.—Applications to
JUDKINS, LTD., Tuttle Hill. Nuneaton.

VACANCY exists with well-known building and
civil engineering contractors in Portsmouth for
SURVEYOR with sound knowledge and experience
of int m valuations, final accounts and site measuring.—Full particulars to INO. CROAD, LTD., Portland
Street, Portsmouth. (Ref. KK.)

ESTIMATOR REQUIRED, with previous experience of pricing bills of quantities, taking-off for new work, alterations, etc., up to £15,000. Excellent opportunity of progressing to larger contracts,—Reply, stating age, experience, and salary required, to JNO. CROAD, LTD., Portland Street, Portsmouth, (Ref. KK.)

EXPERIENCED OPERATOR REQUIRED for modern coated macadam plant. Permanent position and good wage to suitable applicant.—Apply to JUDKINS, LTD., Tuttle Hill, Nuneaton.

LTD., Tuttle Hill, Nuneaton.

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PERSONNEL ADMINISTRATION LIMITED APPOINTMENTS DIVISION 2 ALBERT GATE, LONDON, S.W.1

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CONTRACT

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Tender:

To be enclosed in a plain sealed envelope and are to be enclosed in a plain sealed envelope and are to be received by the undersigned not later than 12 Noon, SATURDAY, 28th January, 1961.

T. F. SIDNELL. Town Clerk.

Town Clerk's Office, 40 Grosvenor Place, Margate.

Margate.

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N. E. DEMUCK.

N. E. DEWICK, Town Clerk.

Town Hall,
Wisbech.
December, 1960.

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BOROUGH OF COLCHESTER.

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Tenders, in the envelopes provided, must be delivered to the undersigned not later than Noon. 23rd JANUARY, 1961.

B. A. FRANCIS.

The Council of onto the tenders.

B. A. FRANCIS.

B. A. FRANCIS.

Municipal Offices,
Coval Lane,
Chelmsford,
19th December, 1960.

U R B A N DISTRICT COUNCIL OF
COULSDON AND PURLEY.

PRIVATE STREET IMPROVEMENT WORKS. SHAW CRESCENT AND SHAW CLOSE.

SANDERSTEAD.

TENDERS are invited for the ABOVE WORKS.
Bill of Quantities and Form of Tender, prepared
by H. M. COLLINS, A.M.I.C.E. may be obtained
upon deposit of £3 3s., which will be refunded upon
receipt of a bona-hde Tender.
Plan, Seecification and Conditions of Contract may
be inspected at the Council Offices.
Sealed Tenders, I compare provided and
Sealed Tenders, Tenders and/or Shaw Close
Improvement Works," must be delivered to the undersigned not later than First Post on THURSDAY,
12th January, 1961.
The Council do not bind themselves to accept the
lowest or any Tender.

ERIC F. J. FELIX,
Council Offices,

Council Offices, Purley, Surrey.

ROROUGH OF DAGENHAM. RESURFACING FOREST ROAD (ROMFORD ROAD TO ROEBUCK ROAD).

TENDERS are invited for BURNING OFF the EXISTING SURFACE (716 sq. yd.), LAYING 630 tons BITUMINOUS CONCRETE, and LAYING BY MACHINE 4,900 sq. yd. x 2in. BITUMINOUS MACADAM WEARING COURSE.

Forms of Tender, etc., are obtainable from the Borough Engineer and Surveyor.

JANUARY, 1961. KEITH LAUDER. Town Clerk.

Civic Centre, Dagenham

OF BECKENHAM. BOROUGH TO CONTRACTORS.

The COUNCIL of the Borough invite TENDERS the FOLLOWING SUPPLIES and WORK during the ar beginning 1st April, 1961:—Concrete Kerbs and Quadrants. Concrete Paving Slabs.

Concrete Kerbs and Quadrants.
Concrete Paving Slabs.
Cement.
Tar And Bituminous Emulsions for Surface Dressing.
Granite Chippings.
Coarse Aggregates, Sand and Shingle.
Ready Mixed Concrete.
Ready Mixed Mortar.
Stoneware Pipes.
Tarred Macadam.
Combinate and Bitumen Macadam.
Combinate and Macadam.
Combinate and Macadam.
Combinate and Macadam.
Combinate and Macadam.
Forms Office and Combinate and Combination of the Combinate and Combination of the Combination

R. WEBSTER STORR. Town Clerk.

Town Hall, Reckenham, BOROUGH O F CHELMSFORD.

PROVISION AND ERECTION OF GROUP "A"
STREET LIGHTING COLUMNS AND LANTERNS—
TRUNK ROAD, A.12—WHITE HORSE PUBLIC HOUSE
TO WOOD STREET ROUNDABOUT,

TRUNK ROAD. A.12—WHITE
TO WOOD STREET ROUNDABOUT.

TENDERS are invited from contractors experienced
in street lighting column erection for the SUPPLY
and ERECTION of 24 35ft. mounting height STEEL
COLUMNS and 200-W LINEAR DISCHARGE SODIUM
LANTERNS, and ancillary works
Tender documents may be obtained from the
Erough Engineer and Surveyor Municipal Offices,
Tender documents may be obtained from the
action of the supplementation of th

Municipal Offices,
Coval Lane,
Chelmsford, Essex.

BOROUGHOF CHELMSFORD. ST. JOHN'S ROAD AREA—SURFACE WATER

FIXED-PRICE TENDERS are invited for the CONSTRUCTION of 100 lin, vd. of 30in dia, SEWER, 113 lin, vd. of 24in, dia, SEWER, and 42 lin, vd. twin 18in, dia, SEWER, and 42 lin, vd. twin 18in, dia, SEWERS, together with necessary Wanholes and incidental works, including the Demolition of existing Sewers.

Drawings may be inspected at, and Conditions of Contract, Specification, Bill of Quantities and Form Contract, Specification, Bill of Quantities and Form of Sewers and Se

B. A. FRANCIS. Town Clerk.

BOROUGH OF WOKINGHAM. 31 DWELLINGS.

TENDERS are invited for the ERECTION of 31 DWELLINGS in WATERLOO ROAD. Drawings, Bills of Quantities and Specification, together with Forms of Tender may be obtained from the Borough Surveyor payment of £2 2s., which will be returned on receipt of a bona-fide Tender. Tenders should be sent to me not later than MONDAY. 23rd Jahuary, 1961.

L. GODDARD SMALLEY. Town Clerk.

Town Hall, Town Clerk. Wokingham, Berks, 23rd December, 1960.

TENDERS are invited for SUPPLYING BIB AND BRACE OVERALLS, OVERALL JACKETS and INDUSTRIAL GLOVES.

Forms of Tender may be obtained from the Borough Engineer.

Tenders must be returned, in the envelope provided, bearing no mark indicating the sender, to the undersigned not later than 10 a.m. on MONDAY, 16th January, 1961.

Sample clothing should be submitted to the Borough Engineer.

Sample clothing should be submitted.

Engineer.

The Corporation reserve the right to accept the whole or part of any Tender and do not bind themselves to accept the lowest or any Tender.

W. H. JONES,

Town Clerk.

Municipal Offices, Twickenham

BOROUGH OF BILSTON. CONTRACT NO. 248.

RECONSTRUCTION OF STORMWATER SEWER AT LAVENDER GROVE, BILSTON.

TENDERS are invited from public works contractors for the ABOVE CONTRACT, which includes the Laying the ABOVE CONTRACT, and includes the Laying the ABOVE CONTRACT, and includes the ABOVE CONTRACT, and includes the ABOVE CONTRACT CONT

A. M. WILLIAMS, Town Clerk.

Town Hall,
Bliston, Staffs,
December, 1960.

BOROUGH OF BILSTON. CONTRACT NO. 247.

BRADLEY LANE SOUTH HOUSING SITE

INITIAL SITE LEVELLING WORKS.

TENDERS are invited for the ABOVE WORKS.
TENDERS are invited for the ABOVE WORKS, which comprise of 233,000 cu, yd. of Bulk Excavation and Site Levelling 48 acres, together with Land Drainage and other ancillary works.
The Specification, Bills of Quantities and Form of Tender may be obtained from, and the Drawings inspected at, the Office of the Borough Engineer, Municipal Buildings, Hall Street, Bilston, Staffs., upon period of a bona-fide Tender not subsequently withdrawn, of a bona-fide Tender not subsequently withdrawn.
Tenders, in plain sealed envelopes endorsed "Contract No. 247—Bradley Lane South Housing Site Extension—Initial Site Levelling Works," must be delivered to the undersigned not later than 12 Noon on TUESDAY, the 10th January, 1961.
The Council does not bind litself to accept the lowest or any Tender.

A. M. WILLIAMS.

CITY

Town Hall, Staffs Bliston, Staffs December, 1960.

I T Y O F P L Y M O U T H.

TENDERS are invited for the SUPPLY and DELIVERY of the UNDERMENTIONED MATERIALS:—

(I) Road and Building Stone—Elvan, Granite, Limestone, Coated Macadam, (iii) Frecast Concrete Flagstones. (iii) Sand for Concreting, Asphalt and General For the period 1st April, 1961, to 31st March, Conditions, Specifications and Forms of Tender may

1962. The period 1st April, 1961, to 31st March, 200 Conditions. Specifications and Forms of Tender may be obtained from the undersigned. Sealed Tenders, in the envelope provided, must reach the Town Clerk, Pounds House, Pewerell, Plymouth, not later than 10 a.m. on TUESDAY, 31st January, 1961.

J. ACKROYD. City Engineer and Surveyor.

The Guildhall, Plymouth, 7th December, 1960.

WHITWORTH URBAN DISTRICT ANNUAL SUPPLIES. 1961-62.

ANNUAL SUPPLIES. 1961-62.

The above Council are prepared to receive TENDERS for the SUPPLY of the UNDERMENTIONED MATERIALS for a period of 12 months commencing 1st April, 1961.

(2) Bituminous Granite.

(3) Local Broken Stone.

(4) Sand.

(5) Coke and Coal.

(5) Coke and Coal.

(6) Tools and Brooms.

Sepecifications, Forms of Tender and any other information may be obtained from the Engineer and Surveyor, Council Offices, Whitworth, near Rochdale. Sur

E. R. CRAWSHAW. Clerk of the Council. Council Offices, Whitworth, Near Rochdale,

HUCKNALL URBAN DISTRICT COUNCIL.

ERECTION OF PUBLIC CONVENIENCES.

TENDERS are invited for the ERECTION of PUBLIC CONVENIENCES (approx. area 800 sq. ft.) in the MARKET SQUARE at the junction with Ogle Street.

MARKET SQUARE at the Junction with Ogle Street, Hucknall.

Tender documents may be obtained on application to the Council's Architects, MESSR. JOHN DUDDING AND PARTNERS, 30 Clarendon Street, Nottingham, where Drawings may be inspected by appointment. Drawings may also be inspected at the Office of the Engineer and Surveyor to the Council during normal office hours, and the secondaried by a deposit of two Guineas, payable to the Hucknall Urban District Council and refundable only to contractors who submit bona-fide Tenders (not subsequently withdrawn) and return all documents.

Tender documents, sealed in the envelope provided, must reach the undersigned not later than Noon on the 3rd FEBRUARY, 1961.

The Council does not bind itself to accept the lowest or any Tender.

H. SHARP, Clerk of the Council.

Council Offices, Hucknall, Nottingham. 20th December, 1960.

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EUCLID REAR DUMP TRUCKS

TOWER CRANES

DERRICKS C/W S.P. BOGIES

ABELSON SK. 25N CLIMBING CRANE

BARBER-GREENE AND BLAW KNOX TARMAC LAYERS

ELSTREE ELEVATORS (FOR USE WITH MIXERS FEEDING INTO LORRIES OR DUMPERS)

MIXERS COMPLETE WITH WEIGHGEAR AND HANDSCRAPERS

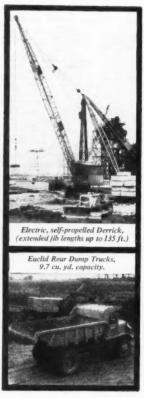
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THE

CONTRACT JOURNAL

INCORPORATING

THE BRITISH CONSTRUCTIONAL ENGINEER AND THE CONTRACTOR

THE CONTRACT JOURNAL

incorporating
THE BRITISH CONSTRUCTIONAL ENGINEER
and
THE CONTRACTOR

Established 1879

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Editor: LAWRENCE McCARTHY

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THE YEAR AHEAD

 $T^{\rm HIS}$ is an appropriate time to take stock of the construction industry's immediate future. First, it is the turn of the year. Second, hard on the heels of some encouraging and authoritative forecasts of the level of activity in 1961, has come talk of general depression, the like of which has not been heard for many years.

The N.F.B.T.E., it will be recalled, decided in October that building activity in 1961 was likely to be at a level some two or three per cent, higher than in 1960—a conclusion that was derived from an examination of all the relevant factors, including particularly the trends in housing, industrial building and roads. Has anything happened in the interim to suggest that the Federation should revise its estimates?

The answer lies in a context far wider than the construction industry alone. It is to be found in the United States, Europe and in the other industries in this country that rely so much on the construction industry's products. At the outset it is necessary to remind oneself of the causes of the present general economic uncertainty. Fundamentally, they stem from the established and well-publicised difficulties of various consumer industries, particularly the motor industry; from the conviction that the credit squeeze is to continue; from rising imports and the disappointing export performance in the face of the growing menace of the European Common Market; from the threat that the current round of wage increases will not be offset by higher productivity; and from the apparently abortive outcome of the talks in Bonn to rehabilitate the dollar. Each of these factors is serious by itself; collectively they constitute a definite threat to the whole fabric of the national economy. But, on analysis, it is doubtful whether they can seriously affect the level of construction activity in 1961.

For one thing, it is evident that the recession is by no means general. Industrial production overall is still running at a very high level. If the consumer goods industries are touched by depression, a number of capital goods industries, notably steel, chemicals, machine tools and construction itself, are reporting boom, or near boom, conditions; even in the motor industry, the makers of commercial vehicles are producing to capacity. At most, therefore, the recession seems to be a patchy business.

Second, the credit squeeze. In the past it has taken more than high interest rates to limit the demand for buildings; so many other considerations are involved. The building societies, it is true, have been groaning slightly but there are no signs yet that sufficient finance will not be forthcoming for all the schemes projected even at prices inflated by the rising cost of land, labour and materials. At least one building society is finding that money is coming in now quite nicely.

Third, rising imports and disappointing exports and the rest. With the best will in the world it is difficult to see how a deliberate cutting back in construction orders could help the position here; indeed, as far as exports are concerned, the outcome could be quite the reverse from that intended, since the answer might well be more buildings produced more efficiently.

Finally, it is important to consider the stage reached by the construction industry itself. A very large proportion of the projects designed to reach a peak in 1961 have already started; a great many, too, are in such an advanced stage of preparation that a postponement would create difficulties out of all proportion to any advantage that may be gained. Coupled with this, is the all important distinction between the construction product and the products of almost any other major industry—the relatively long period that must often elapse between the start and completion of a construction job. This means that it is usually grossly uneconomic to retard construction at short notice. The fact that the Government has now recognised this in the latest Public Investment White Paper lessens the risk that the industry will henceforward be subjected to the fluctuations, stemming from seemingly arbitrary changes in official policy, that have made real progress so difficult in the past.

In the face of these considerations it is difficult to see why contractors, sub-contractors, the associated professions, or the material manufacturers should not enter 1961 in good heart. The order books are full; the general economic outlook may be uncertain but there is a long way to go before there is cause for real concern; and there are encouraging signs that the Government is at last showing a more enlightened attitude towards the problems peculiar to the industry.

John Sumner's Notebook . .

To settle down to the job of keeping my Notebook up to date in Christmas week is a bit wearing. The atmosphere's all wrong. What with turkey, mince pies. Christmas pudding and the usual liquid additives (to maintain the quality of the mix!) I would be quite content to give myself a holiday from writing and my readers a rest from my discourses. The Editor, like all editors, is not, however, of the same mind, which only goes to prove once more my long-held theory that those in authority—like editors, foremen, site agents and architects—are only so because in authority—like editors, foremen, site agents and architects—are only so because they can maintain a coldly aloof, detached

they can maintain a coldly aloof, detached approach to life.

I once knew a foreman like that. He was asked by two of his labourers if they could have the afternoon off to see a local football match. The foreman had a glass eye and he said that if the men could tell him which one it was he'd let them off for football. After a few moments of intent study one of the labourers said it was the right eye. "How do you know?" asked the foreman. "Well," said the labourer, rather hesitatingly, "it's got

know?" asked the foreman. "Well," said the labourer, rather hesitatingly, "it's got a sort of kindlier, friendlier look than the other one." You see the point I'm trying to make, and also the difficulty I'm having getting started on my Notebook this week.

Before I begin in real earnest, however, I should like to wish all my readers a happy and prosperous 1961. May the new work continue to come in at the present rollicking pace, may all the clients pay up promptly and may the merchants and suppliers double their discounts!

GEORGE LOWTHIAN, the M doubtable general secretary of the Amalgamated Union of Building Trade Workers, is a curious mixture. Or so it seems from the public announcements he makes from time to time. In the past I have heard him make speeches on matters already to the building industry which for have heard him make speeches on matters related to the building industry which for sheer common sense and progressive-mindedness would take a lot of beating. They were speeches which most in the industry lack the wit to think of, let alone deliver, as he has done, in the teeth of some violently partisan opposition.

some violently partisan opposition.

Now, to my astonishment, Mr. Lowthian says—in an article contributed to the journal of the Socialist Medical Association—that to get to grips with the problem of rising building accidents the industry should be reorganised by limiting the number of firms to 200 or so—or, even better, having a single nationalised building corporation (funny how the Party line creeps into everything, isn't it?). He believes that there are "thousands of small employers ignorant of safety regulations who are never caught in the inspectors' mesh." Now on the last point he may be right, and I hold no brief for any firm—large or small—which doesn't apply the regulations. But 200 firms—nationalisation! What on earth would that achieve, so far as accidents are concerned? I can tell Mr. Lowthian in one word—nothing. Considering their number the smaller firms have a comparatively lower accidents are tell Mr. Lowthian in one word—nothing. Considering their number the smaller firms have a comparatively low accident rate, and the reason is obvious. There are no figures available, but I'm prepared to believe that there is no particular evidence to show that the safety record of large firms is any worse than, say, the large direct labour departments. Cutting down the number of firms won't help either, for the number of sites will remain the same, big and small, and that's where accidents happen. happen.

The people who can really affect the accident figures and bring them down are the operatives themselves. I listened to Mr. John Hayward in "Building Matters" the other day. On one site he was in-

specting safety-wise he saw a man working high up on a fragile, roof with no crawl board. When tackled the man admitted that his brother had been killed by falling through a similar roof through not taking the proper precautions. The next day Hayward caught the man at it again. "Oh," he said to Hayward. "I thought you'd gone back to London." What chance have safety regulations with men like that? They want their brains tested. And that's where we may have to start, not with nationalisation. nationalisation.

WRITING about "Building Matters", the Network Three programme for the industry on Tuesday evenings, reminds

the Network Three programme for the industry on Tuesday evenings, reminds me of the other interesting discussion I listened to recently in which Mr. Peter Shepherd, the York builder, and Mr. E. L. Jones, the tough but wise London Regional Secretary of the N.F.B.T.O., exchanged some views. This was radio beamed on industry at its best and why this programme does not attract a bigger audience defeats me. Perhaps it will when it becomes more widely known.

Mr. Shepherd wants a reduction in the apprenticeship period. It can be as low as three years, but most employers—probably thinking of their own experience—still think it is five years and boggle at the prospect of committing themselves for so long a period. Pre-apprenticeship training is, of course, the answer. Boys are selected without any particular firm in view and spend a year at the technical college, doing the work of each trade to enable them to choose more easily that which is best suited to their abilities. This year of concentrated training under skilled supervision can result in a much shorter. year of concentrated training under skilled supervision can result in a much shorter apprenticeship and even a conclusion of articles at 19.

Mr. Jones is also keen on the pre-

Mr. Jones is also keen on the pre-apprenticeship system, but he has a big question mark in his mind about it. He wouldn't be the calibre of trade union official I know him to be if he didn't. He thinks that if a young man completes his training as a craftsman at 19 he should be paid a craftsman's wage. And why not? This question should never arise. But as it seems to have done perhaps the National Joint Apprenticeship Board will

National Joint Apprenticeship Board will have a look at it.

And just to show that Mr. Jones has other things than the "big shilling" in his mind this is what he said at the conclusion of his broadcast: "It doesn't necessarily follow that when a boy has finished his apprenticeship he is fully trained and fully skilled—he has still got to learn." And that applies to craftsmen everywhere and of all ages.

WEEK or two back I commented on the "bulge" and the unawareness of many building contractors of the big many building contractors of the big opportunities they now have to safeguard the strength of their labour force in future years. The firms in the South and Midlands, I gather, seem to be taking on an increased number of properly indentured apprentices, but the firms in the North scarcely do any indenturing at all and, what is more, they seem not to have heard of the registration of apprentices.

Well, the "bulge" time is with us. I have already mentioned in this Notebook that if the firms won't get to grips with

have already mentioned in this Notcook that if the firms won't get to grips with the problem of giving these youngsters the chance to acquire technical skill their hands may be forced. Now Mr. John Hare, the Minister of Labour, has shown his hand. Mr. Hare believes in the doctrine that the responsibility for industrial reading lies with industry. But he has training lies with industry. But he has warned the members of the Industrial Training Council that if industry fails to

meet the challenge of the bulge there will be such an outcry for Government action "that the basic doctrine that the responsibility for training rests with industry may be subject to pressure that will be very hard to resist." There you have it, Industrialists—and that means building contractors as well—must get on with it themselves, and quickly, or be dragooned into doing it. I'll bet I know what is going to be the better arrangement for the firms in the long run.

MR. HARE is not the only one giving industry a bit of a shaking up about the "bulge." Dr. Kathleen Ollerenshaw, chairman of the Manchester Further Education sub-committee, told a meeting of the North-Western Education Association for the Building Industry the other day that if the building industry is to recruit boys of quality, employers must be prepared to accept recruits not only at 15 or 16 after a full pre-apprenticeship year, but at 16 after a general school education—with or without Ordinary Level passes—and at student and graduate level also. With regard to the "bulge" she saw no alternative to the suggestion that recognised firms should pay a compulsory training levy. Perhaps, she suggested, the building industry could lead the way in this. lead the way in this.

DR. OLLERENSHAW, however, is not in too strong a position to exhort the building industry. The Manchester Education Committee is the motive force behind a Careers Week at Manchester Technical College. One of the big features of the education facilities offered by the technical college at Manchester is the Building Department. You would expect the Department to be taking a leading part in the arrangements for the Careers Week, wouldn't you? Not a bit of it. So far as I can gather building will not be featured during the week and the Manchester contractors, who cannot understand why they have not been invited to prepare and mount a suitable display giving information on the careers opportunities they have to offer, feel excusably frustrated. frustrated.

Training and careers are matters in which industry and the education authorities should work together. The Manchester Education Committee doesn't

seem to think so.

THERE is one Education Committee that does though—that of Glasgow. Not long back I mentioned that local authorities have it within their power to force contractors to take a reasonable number of apprentices by not inviting tenders from firms which try to slide from this responsibility. The Association of Municipal Corporations considered the issue and left it to individual authorities to act on the matter as they thought fit. Now the Glasgow Corporation Education Committee has decided to give preference in all future building contracts to those Committee has decided to give preference in all future building contracts to those firms which provide day-release facilities for their apprentices. This is a good move. If a firm has no apprentices it can't be providing day-release facilities. Therefore it won't get the contracts it hopes for. The Education Committee is also to ask the General Finance Committee to adopt a similar policy in placing building contracts. The Glasgow Local Loint Apprenticeship Committee, which is Joint Apprenticeship Committee, which is strongly in favour of day-release, reported to the Committee that firms not supporting day-release were being given local contracts. Glasgow Corporation's standing orders provide that firms must give day-release one day per week. In actual practice, though, Glasgow compares unfavourably with other Scottish cities. The Scottish National Building Trades Federation (Employers) and the Unions support day-release, but there are many firms which do not support the system. They should take note that the employers' organisation has asked the Secretary of State to enforce day-release conditions.

Concluded from Previous Issue

BUILDING THE 36-MILE CANAL OF THE KYLE IRRIGATION SCHEME

THE prime motive for the construction of the Kyle Dam in Southern Rhodesia (described in last week's issue) was to irrigate the extensive Triangle Sugar Estate. This irrigation, provided by a canal just over 36 miles long, is in fact the major feature of the scheme, and represents approximately double the capital cost of the dam itself. The canal averages about 12ft. wide at the base and 6ft. deep, with a width at ground level of about 30ft. This article deals with the contractor's problems in its construction. problems in its construction.

problems in its construction.

The canal starts from the concrete weir 60 miles downstream from the dam, and picks up the controlled water from the dam outlets. The main problem, apart from constructional and administrative difficulties, was to find the best solution for a big volume of excavation, including hard decomposed granite and hard unweathered rock, and also a solution for vibrating the lining in such thin shells up slopes of about 45 degrees. Between these two operations was also the tiresome business of trimming excavated sides to a degree of accuracy which neither fell foul of the thickness tolerances nor gave away excess of concrete.

The first problem of excavation resolved

away excess of concrete.

The first problem of excavation resolved itself into a tractor scraper operation, with machines biting into the canal section down steep ramps left at 300ft. or 400ft. spacing, and out again at the end of the loading run, up a ramp, along the tipping area, which was usually in a protective side embankment, and back into the cut. This method worked well: in fact, in the particular formation experienced it is probably fair to say that it was the only method ably fair to say that it was the only method of doing the work.

The ground was very hard and very dry, interspersed with a lot of decomposed dry, interspersed with a lot of decomposed granite, which was still so hard that it gave rise to blue smoke from heavy tractor mounted hydraulic rippers. There was also, of course, a proportion of boulders, and a fair amount of hard unweathered rock. In those circumstances draglines made no impression, and were difficult to control to the fine tolerance needed in the excavation. The difficulty was the congestion of space, as three different types of equipment had to pass through the same comparatively narrow canal in order to carry out all the processes required.

Because of this congestion, the use of

crete lining. When solid rock requiring explosives was encountered, this meant a further process, and one which of course could only be tackled when the other equipment had passed on to the next

The rock was tackled in the usual way



Excavating a canal cutting

rubber-tyred scraper units and pushers, or even track-propelled scraper units with pushing assistance became unpracticable. As the work proceeded, the rippers had to be passed through the soil, and as this loosened earth was removed, graders had to pass through to cut the stepped sides of excavation to as nearly as possible the smooth sloping batter needed for the con-

with compressors and blasting, and the mucking out of broken rock was largely by hand, as most of it was in isolated outcrops. Where solid rocky sections were experienced 19RB face shovels with tipping vehicles were adopted for mucking out.

As the excavated soft material was spread along the banks of the side of the canal, compaction units and graders had to see that shape was maintained, and to see that shape was maintained, and carry out light compaction to 90 per cent. of Standard Proctor. At times the soil coming out of the cut was so dry that water tankers had to spray it, and disc harrows mix it to produce a tilth which was capable of being compacted even to this moderate standard.

this moderate standard.

The canal went through an assortment of configurations of ground, involving the use of quite extensive siphons, which will be described later, and also earth embankments. The embankments were unuisance, because again there was congestion of space for all the machines on operations which had to be performed, and not enough volume to give much employment to the big machines, which are most economical in this class of work. Thus, multi-purpose units had to be devised on approximately the following establishment to each. to each.

to each.

A tractor scraper, with bulldozer blade on the prime mover to strip borrow pits, dig, and spread earth. Water tankers sorayed this with water, and a further class one tractor towed gangs of heavy discs with 28in. diameter blades to mix in the water and create a suitable tilth. The same class one tractor had to change the harrows for a 30-ton pneumatic roller, and compact the prepared area until the specified density of 97 per cent. Standard Proctor had been achieved.

Throughout this chain of processes, the



A grader trims the batters of a length of normal section on the canal

laboratory assistants kept a check on the water content and density, so that each layer of, say, 8in. after consolidation was up to standard before work proceeded on the next.

up to standard before work proceeded on the next.

The method specified for constructing canals over embankments required filling and compaction to proceed to the level of top of earth banks of the canal, and thereafter re-excavation of the canal profile before placing of lining. The lining over these embankment sections was also thickened up to 4in, and reinforced with fabric; furthermore, expansion joints at 25ft. centres across the canal were sealed with P.V.C. waterstop.

The interruption to steady sequence of operations by both changing ground conditions such as the occurence of rock, and different techniques required by the configuration of the ground, was a major problem in maintaining progress. Often normal canal section would lead into a short embankment involving barely 1,000 cu, yd. of fill as a transition stage for the beginning of a siphon. The siphon itself had open and closed transitions of section to bring the water into the 88in, diameter virgular reinforced concrete barrel, which to bring the water into the 88in, diameter circular reinforced concrete barrel, which circular reinforced concrete barrel, which

Concrete Lining

Further variations on the straight-forward canal theme were bridges for access over it, pipe and box culverts for drainage under it, occasional water off-takes, and above all innumerable curves of tight radius, usually of the order of 200ft. These variations on the standard theme, particularly the tight radius of curves, influenced the method adopted for concreting the lining.

curves, influenced the method adopted for concreting the lining.

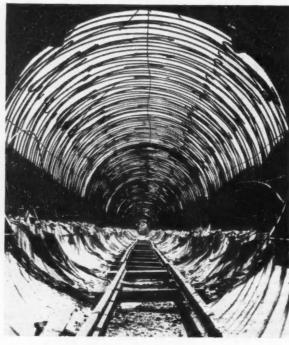
American type travelling slip forms were considered but, apart from the steep curves and siphons which would have meant extensive interruption and dismantling, it was also doubtful whether the concrete could be satisfactorily worked by this method to such a thin section as 2½in. It was therefore decided to try a transverse slip form with vibrators mounted on it, to be drawn along the bottom of the it, to be drawn along the bottom of the canal by hand winches and then up the slope, the concrete being placed by hand in front of the slip form and retained transversely by metal road forms of cor-

transversely by metal road forms of correct shape.

This slip form was heavy enough to ensure that it did not leave the side forms by the bouyancy of the vibrated concrete under it. Most of the vibration was to be carried out by pokers in the wave of concrete preceding the slip form, so that

the risk of boiling up after its 27in. width

The slip of the slip of the slip of the slip of the slip form was not popular with the men in spite of reasonable arrangements made for handling it as conveniently as possible, and passing it longitudinally from



Inside one of the siphons with elliptical reinforcement in position after concreting of the invert section. The rail track is for the trolley which transports the collapsible arch shutter

bay to bay with the minimum of effort. It was found instead that, by reducing the length of section specified at 15ft, to half the amount, namely 7ft. 6in., an ordinary wooden tamping screed with petrol screed vibrator mounted in the centre worked perfectly satisfactorily, and could be pulled up the slope by a gang of native labourers pulling on a rope each side.

Immediately each bay had been concreted and vibrated with this tamper, native plasterers got to work on it to give the steel trowel finish called for. The compaction and working of the steel

trowels over such a thin lining following upon the vibration produced a density of concrete which was as good as could be achieved by any other compactive means, and this method was thereafter adopted throughout.

Mixing and placing of concrete was arranged as a compromise between the lack of waste and better control of a permanent set up, against the expense and other disadvantages of long transport, including the difficulty of access to the canal itself, bearing in mind that there were occasional deep cuttings and Mixing and placing deep cuttings and always the side banks. Sections of about 400yd, were concreted in one set up, the concrete be-ing distributed along the small berm bethe small berm be-tween the side banks and the canal by mono rail. Water was in part dis-tributed by a temporary constructional pipeline which went forward with the job, and partly by road water tankers feedwater tankers feed-ing static tanks at each set up. Curing was by spraying on a patent protective sealer membrane.

Siphons formed a big part of the job both in length and value — about two

both in length and value—about two miles had to be constructed—and purpose made metal formwork was designed and constructed so that the internal arch could be collapsed on to a carrying trolley, and could pass through sections still erected and in place. The shuttering method was quick and effective, and enabled two 24ft. sections of barrel to be cast a day with six corresponding sets of shuttering. The concrete was weighbatched by swing weighbatchers, and vibrated by portable diesel engined poker vibrators. The 24ft. sections of barrel had to be cast alternately, and each construction joint was sealed by continuous p.v.c. waterstop right round the perimeter.

The oval perimeter reinforcement required careful bending and fixing, and once the invert section was cast a dense cage was produced which meant that access to the inside of the barrel for fixing the arch shuttering was only through completed parts of the tunnel. Here again was

the arch shuttering was only through com-pleted parts of the tunnel. Here again was further justification for the collapsible formwork adopted.

Amenities

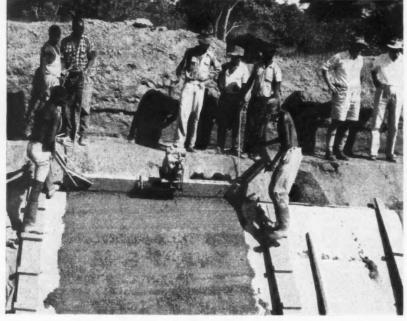
Amenities

A major problem on this job was of course providing suitable housing for both European and native workers, and amenities to keep them happy.

Everything necessary for life had to be constructed and imported, and the simplest comforts and amenities of life depended on action by the contracting company. Fortunately there was an airstrip nearby which enabled a small aircraft to be owned and operated for improved communications with Fort Victoria, the nearest small market town, and Salisbury, where a base office was established for the group of jobs. The landline telephone communication was very moderate, as it depended on a conductor on wooden poles passing over literally hundreds of miles of bush, and this landline was obviously vulnerable to the depredations of giraffes, bush fires, storms, and even the affection for copper wire which some of the natives appeared to exhibit.

A radio telephone link was established between the site and Salisbury, and over-

A radio telephone link was established between the site and Salisbury, and over-



Vibrating the canal lining

came the difficulties and frustrations of the landline and the non-existent postal system. Along the job itself, personnel vehicles such as Land-Rovers were equipped with v.h.f. radio telephone com-municating with the base office, and this again minimised the frustrations and de-lays which are inevit.

frustrations and de-lays which are inevit-able with a spread out job requiring prompt action to deal with constant changes and pro-blems arising from the work.

Substantial work-shops were of course set up on the site, to keep the fairly large complement of earth-moving and concretmoving and concreting machinery maintained, and in addition a good exchange system of subassemblies and unit parts with base workshops was established.

established.

The canal commenced immediately after the award of the contract in September 1958, but built up slowly to peak, due to the difficulties of recruiting such a large native labour force in a thinly populated reserve, far away from any dense popufrom any dense population centres. There was also the unavoid-

was also the unavoidable slow build up involved in testing out different excavation and concreting methods, before bulk orders could be placed for all the plant that was needed to

methods, before bulk orders could be placed for all the plant that was needed to carry out the job.

Finally, the contract for this part of the work was let on preliminary siting of the canal, and consequently rather rough estimates of quantities, particularly of earthworks and rock. It was only halfway through the job with final alignment nearly completed, and considerable experience gained, that it was firmly established that the quantities of earthworks were about 80 per cent. up on those originally tendered on. Extra plant was fed in, and extra labour force of operators had to be built up, with expansion of camps and all the facilities needed to go with it.

In spite of this, and substantial extra works ordered, in the form of a 12-mile extension of the canal, raising of the head weir, etc., the work is proceeding at satisfactory pace, and there is at least a chance that the original completion date for passing of water on December 31, 1960, set for the original contract without extensions, may be achieved. In any case, it is confidently believed subject to the

1960, set for the original contract without extensions, may be achieved. In any case, it is confidently believed, subject to the many catastrophes that can befall a contractor in darkest Africa, that the extended completion date for all work, namely end of October 1961, will be achieved by a comfortable margin.

Canal Statistics

Canal Statistics

Total length—36.1 miles.

Total soft excavation—1,900,000 cu, yd.; rock—100,000 cu, yd.

Canal concrete lining approximately 50,000 cu, yd. or 600,000 sq, yd.

Siphons—88in. diameter, 11,000 lin. ft.

Total concrete, all works—78,000 cu, yd.

Excavation commenced December 1958; lining May 1959.

Maximum concrete poured in one week—1,800 cu, yd.

Total cement used—22,000 short tons.

Total cement used—22,000 short tons.
Total reinforcement—1,000 short tons.
Total shuttering, all works—80,000 sq. yd.
Peak labour strength—80 Europeans,
1,700 Natives.

Designers and Contractors

The Kyle Dam and Irrigation scheme

has been constructed for the Government of Southern Rhodesia, Irrigation Division. Andre Coyne and Jean Bellier acted as consulting engineers for the dam. The main contractor for all the works is McAlpine and Concor (Private), Ltd.,



A section of finished canal lining with bridge over

Salisbury, South Rhodesia. This company is a joint venture, specially registered for carrying out the work. Alfred McAlpine and Son (Pty.), Ltd., which is associated with Sir Alfred McAlpine and Son, Ltd., of Great Britain, holds 65 per cent. of the shares and Concor Construction (Pty.), Ltd., of Johannesburg, holds 35 per cent. of the shares. Concor Construction is associated with Ferrocemento of Rome.

Acknowledgments

The permission of the Irrigation Division, Southern Rhodesian Government, for this article to be published is acknowledged with thanks.

Certain photographs have been used by kind permission of Mr. K. F. Solberg.

EARLY COMPLETION OF 12-STOREY NEWCASTLE FLATS

THE first block of multi-storey flats to be completed under the City Council's redevelopment scheme has been opened at Heaton Park Road, Newcastle upon Tyne.

Newcastle upon Tyne.

This block, Heaton Park Court, was finished by Leslie and Co., Ltd., 25 weeks ahead of the revised contract date for the building and 42 weeks ahead of the date given at the time of tendering for the full £1 million contract which also included three 15-storey blocks at Shieldfield and two 12-storey blocks at Cruddas Park.

The structural frame of the block is of re-

two 12-storey blocks at Cruddas Park.

The structural frame of the block is of reinforced concrete on pile foundations with external walls of facing brick. Aluminium-framed sash windows, with colourful vitreous-enamelled panels below them, make for easy maintenance. The block contains 47 two-bedroom flats, 24 one-bedroom flats and a ground-floor flatlet with bedsitting room, bathroom and kitchen. There are six flats to each floor—four with two bedrooms and two with one bedroom—served by two electric passenger lifts.

Heating is by gas fires and hot water is provided from gas multi-point heaters; the kitchens are ultra-modern and each flat is supplied with a gas heated drying cabinet. Refuse disposal is by a chute system accessible at each floor level.

Scale Model

The flats are designed by the city architect, George Kenyon, Dip. Arch., A.R.I.B.A., Dip. T.P., A.M.T.P.I., and his staff, with John Liversedge and Associates acting as consulting engineers.

acting as consulting engineers.

The blocks of flats will all be similar in design to Heaton Park Court. To speed construction on their programme, the contractors' team spent considerable time planning operations and co-ordinating subtrades before work started on the original contract; and to give site staff a clear picture of the construction, a scale model was made of the reinforced concrete frame which is common to both 12-storey and which is common to both 12-storey and 15-storey blocks,

Leslie and Co., are also currently engaged on the construction of a further three 15-storey block of flats at Church Street and three at Eastfield Avenue. They will start work on another two 15-storey blocks at Longbenton early in 1961. Their current contracts for fourteen blocks of flats in Newcastle, to house 1,206 families, are valued at some £23 million.



Alternate bays of lining being concreted on the canal. Note the Monorail on the right bank

VARIATIONS IN INDUSTRIAL OUTPUT

Construction Hampered by Labour Shortages

FROM 1946 to 1959 industrial production as a whole rose by well over a half in the United Kingdom. Expansion was rapid in 1947 to 1950, 1953 to 1955, and 1959 to early 1960. In the first two of these periods the annual rate of gain was in the region of 5½ to 6½ per cent., in the third about 9 per cent. In between were spells of steady or falling production.

In the six years to 1953 average output (as measured by the index) rose 30 per cent., in the six years since by nearly 20 per cent.; but these are average figures and do not apply to the individual industries

do not apply to the individual industries comprising the index.

According to the Treasury's Bulletin for Industry, this year the rise in total industrial production has slowed down as industrial production has slowed down as the net result of the two contrary influences at work: on the one side the weakening of exports and the restrictions on credit, and on the other the increased investment in buildings, plant and machinery and in stocks. Over the first ten months the level of industrial production was about 8 per cent. above that a year earlier, but the total has not been increasing since April. Compared with last year most industries have shown considerable rises.

Pace-Setters

To the third quarter the pace-setters included the oil refineries, chemicals, vehicles and metals; since then vehicles will have been affected by the fall in car output (a fifth of the whole vehicles index), stemming from weakening export and home demand. Within engineering, the output of capital goods has continued up-wards, while consumer goods production has fallen sharply in response to the weakening home market, exports being small.

Small.

Output of building materials, glass and in paper, printing and publishing has been high. Construction has continued to rise, but skilled labour shortages have continued to hamper growth, as in some

engineering capital goods. Output in shipbuilding, coal and leather has continued to fall, sufficient to bring the whole index down by about half a point; in coal, consumption has however been above output and stocks have been run down substantially. The figures are:

(% change in production in 1960 on a year earlier)

	1st half	(prov.)
Construction	+ 6	+ 5
Mining and quarrying	- 3	- 5
Food	+ 2	+ 4
Drink and tobacco	+ 8	- 2
Coke ovens, oil refineries	+ 7	+14
General chemicals, etc	+13	+11
Ferrous metals	+23	+15
Non-ferrous metals	+21	+12
Mechanical engineering	+11 }	
Electrical engineering	+10	+ 6
Shipbuilding, marine		
engineering	-10	- 9
venicies	+15	+ 9
Textiles	+ 7	+ 3
Leather goods, fur	- 1	- 3
Clothing, footwear	+ 8	+ 6
Bricks, cement, etc.	+11	+ 7
China, earthenware, etc.	+ 4 + 14	+ 2
Glass	+14	+10
Timber, furniture, etc	+ 7	+ 1
Paper, printing and		
publishing	+15*	+15
Gas, electricity, water	+ 7	+10
*Output in 1959 affected by	the printing	dispu

For some years after the war demand was in excess of supply so that the rise in production was mainly limited by available resources. Intensifying overseas competition since then has led to a slower growth in many parts of industry, or to actual falls, and developments in new industries have had a similar impact on output in some of the older ones.

put in some of the older ones.

Forces such as these are at work all the time, says the Bulletin for Industry.

Superimposed on them at present are the short-term fluctuations arising from falling exports and the credit squeeze. But in the short-term, as in the long, generalisations about the level of produc-tion can be misunderstood because the experience of different industries varies widely.

Late Construction News

SIERRA LEONE SCHOOL.—A contract valued at nearly £100,000 for a new grammar school at Murray Town, Freetown, has been awarded to Taylor Woodrow (Sierra Leone), Ltd., by the department of the Director of Education for Sierra Leone. Work will begin shortly and is scheduled for completion within 18 months. The architects are Nickson and Borys and Partners, of Freetown, and the consulting engineers are Oscar Faber and Partners, 4 Verulam Buildings, London, W.C.1.

W.C.1.

PENZANCE FLATS.—Subject to Ministry

R.C. are to accept the

PENZANCE FLATS.—Subject to Ministry approval, Penzance B.C. are to accept the £115,128 tender of Venn Bros. (Cornwall), Ltd., Penzance, for the erection of 30 two-bedroom flats and nine one-bedroom flats and 31 bed-sitters at St. Clare Street area. Seven-storey Offices.—J. Jarvis and Sons, Ltd., 239 Vauxhall Bridge Road, London. S.W.1, have been awarded a £250,000 contract by French Railways for the erection of a seven-storey office building at Piccadilly, London, W.1.

OSWALDTWISTLE HOUSING.—Work will start next month on the erection of 68 houses and bungalows as the first part of an estate at the Cabin End Farm, Knuzden, for Oswaldtwistle (Lancs.) U.D.C. The contractors are Drury Estates, Ltd., Leicester. Leicester.

BASILDON ROADS CONTRACTS. — The Hadsphaltic Construction Co., Ltd., Ibex House, Minories, London, E.C.3, have had two tenders—at £103,795 and £107,572—accepted by Basildon Development Corhave had

accepted by Basildon Development Corporation for work in connection with the construction of the north-west feeder road from the town centre. The first is for a flyover bridge to take the Southend arterial over the road, and the second is for a road north of the flyover.

CONTRACT FOR 503 HOUSES.—Aylesbury B.C. have approved a scheme for the construction of 503 dwellings on an estate off Bicester Road. The contract, worth £912,555 including roads and sewers, has been awarded to George Wimpey and Co., Ltd. Work will start in the spring and is expected to be completed by the autumn of 1962. of 1962.

BRISTOL MULTI-STOREY LUXURY FLATS

WORK has commenced on the erection of a multi-storey block of luxury flats, with shops, offices and motor showrooms, at Clifton, Bristol, for Land and General Developments,

To be called Clifton Heights, the block To be called Clifton Heights, the block stands on high ground close to the Clifton Suspension Bridge. It will contain 48 flats, a penthouse restaurant and bar about 300ft. above sea level, a roof garden with lily pool, seven shops, second floor suites of offices and a motor showroom with car parking space for shoppers and reserved berths for the cars of the flat-dwellers. Plans provide for 20 one-bedroomed flats, 19 two-bedroomed flats and nine with three bedrooms. The flats, which feature double-glazing to the windows, will be centrally heated and all will have their own entrance lobbies from the main

will be centrally heated and all will have their own entrance lobbies from the main landings to ensure privacy. Two high-speed lifts will serve the flats, with a separate lift for the restaurant. A multi-point television mast, with connections to the reception room of each flat, will be provided on top of the building

flat, will building.

On ground level will be seven shops, with first floor showrooms, approached under cover from a promenade. Rear access, also under cover, will be provided for loading and unloading.

Well over 10,500 sq. ft. of office accom-

modation will be housed on the second floor, and this will be reached by a separate lift and staircase. The motor showrooms will occupy a prominent position with panoramic dis-

play windows on the busy main thorough-

Raymond Moxley, Prior's Field, Abbots Leigh, near Bristol, is the architect for the scheme. The consulting engineers are Clarke Nicholls and Marcel, and the quantity surveyors, Messrs. Gleeds, both of Bristol. Griggs and Son, Ltd., London, a member of the Land and General group of companies are the contractors. companies, are the contractors.

BIRMINGHAM DEVELOPMENT PLAN APPROVED

The Development Plan for Birmingham, embracing the whole of the 84 sq. miles within the County Borough area, has been approved by the Minister of Housing and Local Government.

The L.C.C. are to start negotiations for the acquisition of property in connection with the conversion of the old Kingsway tram tunnel into a subway for two-lane

WAGE INCREASE FOR BUILDERS AND ENGINEERS

At their meeting on January 12, the National Joint Council for the Building Industry will be recommended by their ad hoc negotiating committee to reduce the normal working week from 44 to 42 hours and increase the wage rate of operatives by 6d per hour as from October 2, 1961. (No further differential between craftsmen and labourers is being recommended as was suggested might be the case in our last issue.) In addition operatives will receive a ½d. an hour increase in February under the sliding scale based on the index of retail prices.

The committee is also recommending that when publishing their decisions the Council should stress the need for achieving the highest possible rate of output within the reduced working week in order (1) to allow plant and equipment to be used to maximum capacity; (2) to offset as far as possible the increased costs that shorter hours will entail, and (3) to maintain the maximum volume of employment for the industry.

that shorter hours will entail, and (3) to maintain the maximum volume of employment for the industry.

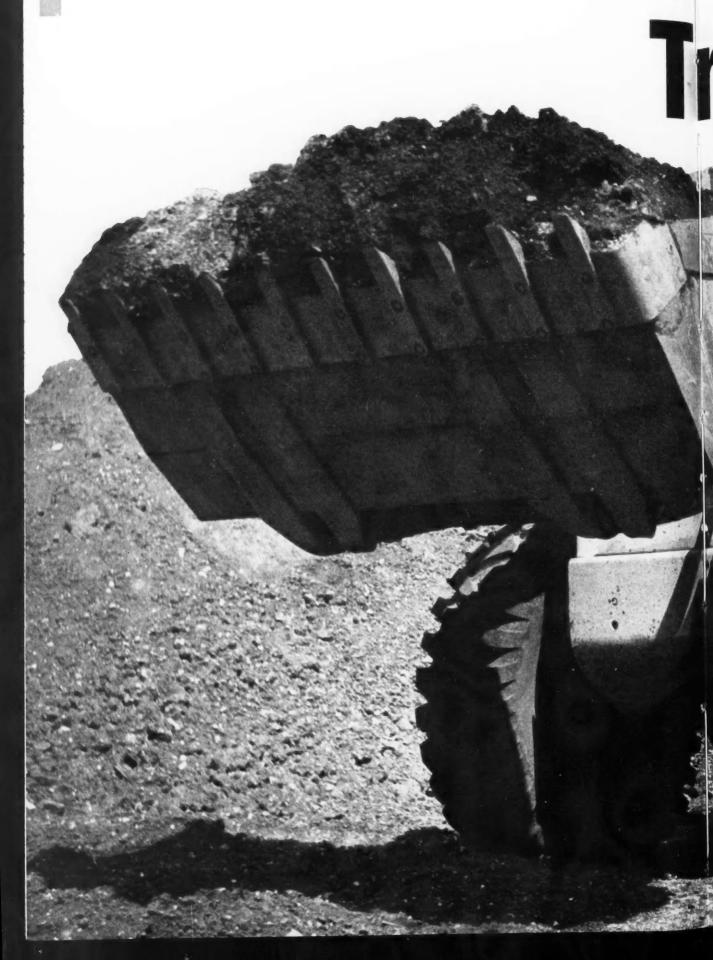
To assist in the attainment of these objectives and to permit of full advantage being taken of daylight hours and good building weather, the committee are also recommending some modification in the matter of overtime control and of the present regulations on meal breaks.

Engineering Rates

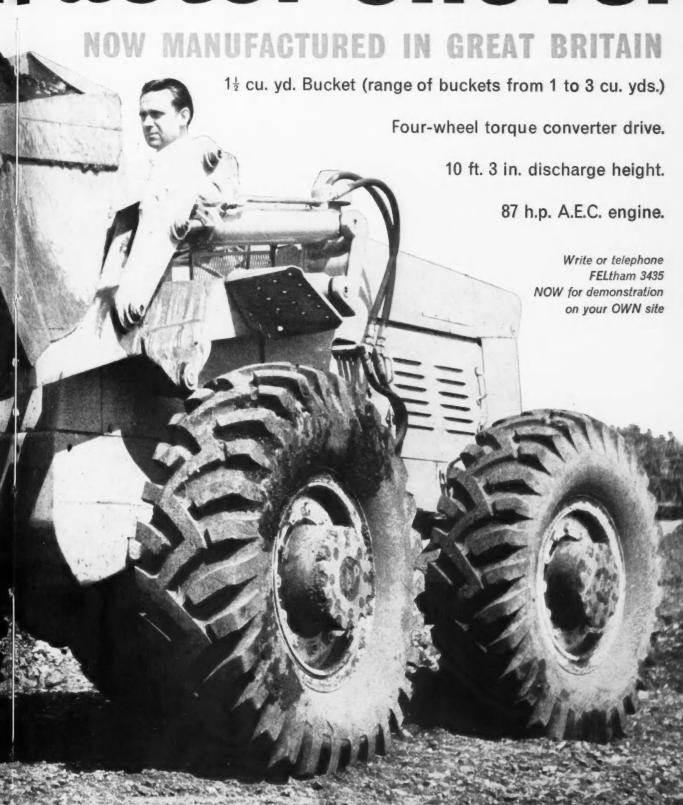
Increases ranging from 7s. to 8s. 6d. per week to take effect from December 26 have been agreed between the engineering employers' federation and the Confederation of Shipbuilding and Engineering Unions.

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II b THE CONTRACT JOURNAL 29/12/60



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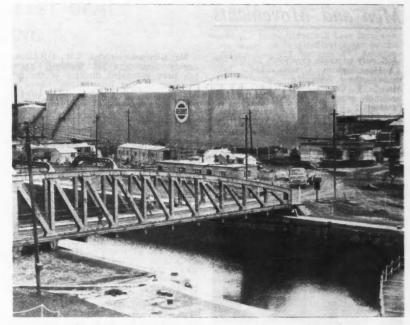
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£ MILLION OIL TERMINAL BUILT AT CARDIFF DOCK



Part of the fuel oil storage tanks seen from across the entrance to Queen Alexandra Dock

A NEW fuel oil terminal for the Regent Oil Co., Ltd., built in under a year at a cost of £1 million, has been opened at Queen Alexandra Dock, Cardiff.

It has been constructed on a 12-acre site by Constructors John Brown, Ltd., who also carried out the detailed design. Whessoe, Ltd., supplied and erected the storage tanks.

storage tanks.

The oil tankage consists of six 42ft, high tanks, two each for light, medium and heavy grades, the total capacity amounting to 6,250,000 gallons. The tanks, which are insulated and equipped with steam heaters to maintain the oil at the required temperatures, are fed by ocean tankers, which berth at a nearby quay in the docks. Incoming cargoes are discharged from the tanker to the shore pipelines by means of three 8in. "Emco" marine unloading arms suitably manifolded into 12in. and 10in. diameter dock-

lines; these follow a route necessitating supports 20ft, above ground level to clear a road crossing and are then inter-

supports 20ft. above ground level to clear a road crossing and are then interconnected to the tanks.

Main pipework between the tanks, pumps and loading points is of 10in., 8in. and 6in. diameter and is arranged so that all the main pipe runs and manifolding can be cleared of oil when required. By means of six positive displacement pumps rated at 600 gallons per minute, any grade of fuel oil may be distributed to the rail car loading rack and to the loading rack for road tankers simultaneously.

Ten 20-ton rail tank cars are accommodated along each side of the rail loading rack, which is equipped with ten Emco" spring balance master arms, the connecting pipework being arranged so that any product may be loaded from any arm. Five arms are located on each side of the rack, so that each arm will load adjacent vehicles without the necessity of the product. adjacent vehicles without the necessity of shunting. Two automatic vertical Cochran

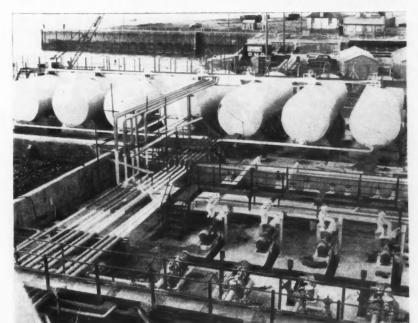
boilers supply steam for tank heating and steam tracing of pipelines.

boilers supply steam for tank heating and steam tracing of pipelines.

Bunkering facilities for the three grades of fuel oils and marine diesel oils have been provided at the ocean tanker berth, thus providing additional facilities for ships coming into Cardiff docks.

The light oil tankage, built in conjunction with the fuel oil terminal, consists of eleven 30ft. high vertical and seven 30ft. long horizontal tanks for the storage of different grades of motor spirit, kerosene and gas oil. The total storage capacity is 1,500,000 gallons.

The fuel oil and light oil loading racks are separated by an island in the centre of a large yard, providing easy traffic flow and vehicle parking space. Adjoining the entrance gateway to the yard on one side is a two-storey office building, which provides accommodation for sales and operational staff with a closed drying room, locker room and messing facilities.



Part of the light oil storage in the new depot

"WHERE ARE THE MOTORWAYS?"

The second chart in the series, "Where are the Motorways?", has been issued by the British Road Federation. Based on a statement by the Minister of Transport, it shows the position at the end of October, 1960.

Each motorway in the network is illustrated by a bar scaled to the mileage constructed or to be developed. Within each bar one of four different colours indicates bar one of four different colours indicates the stages of development which precede construction. The fifth colour, green, shows work actually in progress, while "motorway blue" shows which roads are now open to traffic. In some cases bars without colour appear. These indicate "lines not yet published."

"lines not yet published."

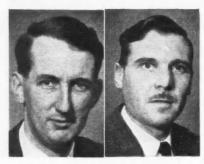
The Federation state that there has certainly been some progress since the first chart was published last July. Now, a total of 126 miles of motorway are open to traffic. Included in this is the 73 miles of M.1. Another 20 miles is accounted for by the recently opened Ross Spur. The remaining distances are: 6 miles of the Lancashire to Yorkshire motorway, and all 7 miles of the Maidstone By-pass. Actually under construction in various

and all 7 miles of the Maidstone By-pass.

Actually under construction in various parts of the country are 64 miles. But those roads which have not yet passed the "good intention" stage total 420 miles. Chart No. 3 will be published in six months' time.

Men and Movements

A S part of their expansion programme Hoveringham Gravels, Ltd., have made the following appointments: Mr. G. F. Cronin, M.A.(Oxon), A.C.A., becomes group secretary. Mr. T. D. Paterson, A.M.I.Mech.E., C.G.I.A., A.M.I.Plant E., is appointed group mechanical maintenance manager. He was formerly employed by George Wimpey and Co., Ltd., in the Middle East. His new appointment will cover the company's quarries. Mr. P. Sweeney becomes sales



G. F. CRONIN

T. D. PATERSON



P. SWEENEY

P. JAMES

manager, Northern Region, joining the group from the Bessacarr Gravel Co., Ltd. Mr. P. James, M.B.E., becomes sales manager, Southern Region. He joined the Hoveringham group's structural engineering subsidiary to organise and supervise sales in the London area. In his new appointment he is responsible for the expanding sales of concreting aggregate and road stone in the southern half of the country.

The London Master Builders Association has appointed Mr. A. W. Taylor to be secretary of its National Contractors Group in place of Mr. P. T. Smith, M.A., recently appointed director of the Midland Federation of Building Trades Employers. Mr. Taylor has been a member of the staff of the Southern Counties Federation of Building Trades Employers for the past eight-and-a-half years. He will take up his duties at Bedford Square in the new year.

Mr. I. S. Whiteman has been appointed to the board of directors of NCK-Rapier, Ltd. He continues as general manager, the position he has held since the formation of the company at the beginning of 1959. Before then he had been general sales manager of the Newton Chambers excavator division from 1955, and previously was overseas representative.

Mr. Roy M. Wilson, Q.C., Recorder of Croydon, has been appointed president of the Industrial Court in succession to Lord Forster, who is retiring.

Lord Bridgeman, chairman of Atlas Copco (Great Britain), Ltd., will visit Africa in the new year. Mr. Gontran Goulden, T.D., F.R.I.B.A., deputy director of The Building Centre, has been appointed director of the 6th Congress of The International Union of Architects which is to be held in London under the auspices of The Royal Institute of British Architects from July 3—7, 1961. Mr. Goulden is vice-chairman of the Congress Organising Committee, and has been closely associated with the work of the International Union of Architects for several years. Some 1,500 architects from all over the world are expected to take part in the Congress, the theme of which is New Techniques and Materials—Their Impact on Architecture.

To handle Head Wrightson's expanding interests in India, a new company, Head Wrightson India, Ltd., is being registered with adminstrative headquarters in Calcutta. The chairman of Head Wrightson, India, Ltd., will be Mr. Peter Wrightson, who is also vice-chairman of Head Wrightson and Co., Ltd., and Mr. Vaughan Pendred has been appointed managing director.

The Ministry of Transport have announced that Mr. R. B. Lang, O.B.E., has taken over a new post, at Under Secretary level, of Director of Lands and Contracts. With the Prime Minister's approval, he has been succeeded as Under Secretary (Finance) by Mr. H. W. Cauthery, who has been transferred from the Ministry of Housing and Local Government.

The new deputy chairman of Simon-Carves, Ltd., is Mr. J. P. V. Woollam.

Mr. J. G. Stewart has joined the board of Stewarts and Lloyds, Ltd.

The new deputy chairman of Vickers, Ltd., from January 1 will be Major-General Sir Charles Dunphie. He will retain his present posts of chairman of Vickers-Armstrongs companies and managing director of Vickers.

Sir Alfred McAlpine and Son, Ltd., have appointed the following new directors: Mr. J. J. Varmen, F.C.A.; Mr. M. S. McVey (local, Hooton area); Mr. K. W. Maxwell, B.Sc., A.M.I.C.E. (local, Wolverhampton area); and Mr. F. H. Fisher (local, Wolverhampton area).

Recently arriving in Germany from the United States was Mr. W. H. Worthington, foreign representative for the John Deere Tractor Company, of Moline, Illinois.

The general secretary of the Iron and Steel Trades Confederation, Mr. Harry Douglass, has been nominated as deputy chairman of the British Productivity Council for 1961.

An extensive tour of Europe, to last some ten or eleven months, will be started early in January by Major R. L. Ellis, who was for several years a director and European representative for a firm of export

was for several years a director and European representative for a firm of export consultants. Now in business on his own account, Major Ellis will travel in a self-contained caravan through all countries west of the Iron Curtain including Yugoslavia. He will represent a number of British contractors' plant manufacturers in the relation of "manufacturers in the relation of th



MAJOR ELLIS

manufacturers in the role of "man on the spot," concerned with selecting, appointing and supervising of agents, and generally looking after the interests of the firms involved. Major Ellis, who may be contacted through the Palace Hotel, Brussels, was at one time responsible for all movement of British Forces' freight in Western Europe. Since then he has made many tours similar to the one proposed.

Mr. Sydney Oxon, a member of the sales organisation of the Goodyear Tyre and Rubber Co., Ltd., is to retire at the end of December, after serving his firm in various important capacities for more than 44 years.

various important capacities for more than 44 years.

Mr. Oxon joined the company in 1916. In 1919 he was appointed assistant to the managing director and in 1920 he became sales manager. After reorganisation and expansion Mr. Oxon was appointed manager of the northern division. In 1931 he was transferred to London, to take up control of the southern division.

He was appointed manager, manufacturers' sales division, in 1946, which position he held until he took up the assignment of O. E. account executive in 1947.



Visitors to T. T. Boughton and Sons, Ltd., Amersham Common, recently were Mr. Ronald Bell, M.P., and Mr. W. T. Jarrett, deputy regional controller, Eastern Region, Board of Trade, who congratulated the company on their export achievements. Equipment manufactured includes tractor winches, side boom cranes, side tip loading shovels, etc., and sales and service personnel have over the years undertaken long and arduous overseas journeys selling and exploring the requirements of the overseas markets. Seen from left to right are Mr. Trafford Boughton, Mr. Ronald Bell, Mr. John Boughton and Mr. W. T. Jarrett

BASILDON'S TALLEST OFFICE BUILDING

Cubitts Begin Work on Tower Block

WORK has just commenced on the first phase of what will be the tallest building on the Basildon Industrial Estate, Essex. This is an 84ft. high office building, being erected for Carreras, Ltd., by Holland & Hannen and Cubitts (Great Britain), Ltd.

and Cubitts (Great Britain), Ltd.

Due for completion in January, 1962, the building has a 146ft, frontage to Christopher Martin Road, including a link to an existing two-storey office building. Of the 37,000 sq. ft. of office space about 23,000 sq. ft. will be in a six-storey tower block with a services penthouse above. The remainder will be over three storeys.

In the tower block the spacious entrance hall has a circular reinforced concrete staircase leading into a double volume inner hall which also acts as the lobby to the two passenger lifts. Mechanical equipment for streamlining company administration will be installed in the large open-

planned three-storey section; electronic computers and allied equipment are con-centrated on the ground floor.

The myriad of cable connections will be rried through a multi-section hardwood lse floor. Considerable heat generated The myriad of cable connections will be carried through a multi-section hardwood false floor. Considerable heat generated by the equipment will be extracted by trunking through to the tower block and out to the atmosphere via the penthouse plant room. Apart from the special consideration given to the electronic equipment, all offices will have continuous sill-line convector heating together with acoustically corrected ceilings.

In an area virtually free from atmos-

acoustically corrected ceilings.

In an area virtually free from atmospheric industrial pollution and the effects of airborne salts from the sea, aluminium curtain walling will be used extensively on the main elevation. The trimming at roof level and first floor of the tower block together with a 14ft. return on the east and west sides of the north elevation have natural stone facings. Marble facings

are used to the ground floor columns of the entrance hall. The whole reinforced concrete framed structure rising from bored pile foundations will have solid concrete floors on longitudinal spine beams. Elliott, Cox and Partners, 172 Buckingham Palace Road, London, S.W.1, are the architects for the building. The structural consultants are Bylander, Waddell and Partners, 169 Wembley Park Drive, Wembley, and the mechanical consultants are G. H. Buckle and Partners, 2 Harrington Gardens, London, S.W.7.

GOOD PROGRESS AT DURGAPUR **STEELWORKS**

The Indian Steelworks Construction Co., Ltd.,—ISCON—expects to beat the scheduled completion date in April, 1961, of stage III of the new £105 million Durgapur Steelworks near Calcutta. At the end of stage III more than three-quarters of the work will be finished and at the present rate of progress it seems this target will be reached ahead of time. Since No. 1 blast furnace went into production at the end of last year activity has intensified at Durgapur. Halfway through 1960 steel making and shaping was under way with the commissioning

was under way with the commissioning of three open hearth furnaces, three rolling mills and the sleeper plant. Operation and construction are now in progress side by side.

Construction is now well advanced on the third and final units of the coke oven and blast furnace plant. The structural work for the remaining four open hearth furnaces in the steel melting shop is complete and two are now lined with refractory bricks.

refractory bricks.

The final two units of the rolling mill plant have progressed so far that some of the electric drives of the section mill have been tried out and mechanical equipment

been tried out and mechanical equipment turned over.

Stage IV—the final stage—at Durgapur includes the wheel and axle plant, details of which were not finalised until after the start of the original contract. Construction has now been phased so that wheel sets for Indian Railways will be produced early in the autumn of next year. The wheel and axle plant, when complete, will have an annual production capacity of 45,000 wheel sets.



An artist's impression of the 84ft, high office building

TRAINING COURSES IN CONCRETE

C. and C.A.'s Provisional Programme

DETAILS of the courses to be held next year at the Wexham Springs training centre and research station, have been announced by the Cement and Concrete

Association.

The provisional programme is as follows:
January 2 to 6, 9 to 13, and 16 to 20—
Design of prestressed and reinforced concrete
bridges for engineers.
January 23 to 27—°Concrete products.
January 30 to February 3, February 6 to 10

—Concrete technology for engineers.
February 13 to 17, 20 to 24 and February
27 to March 3—Structural concrete for design engineers.

March 6 to 10, 13 to 17, 20 to 24 and

sign engineers.

March 6 to 10, 13 to 17, 20 to 24, and April 10 to 14—†Concrete construction for

ngers. April 17 to 21 and May 1 to 5-Structural ncrete for general foremen and clerks of

orks.
May 8 to 12-Concrete roads and airfields

May 5 to 12—Cement-stabilised road and airfield bases for engineers.

May 29 to June 2 and June 5 to 9—Concrete construction for builders and estate

June 12 to 16, 19 to 23 and 26 to 30—Structural concrete for site engineers.
July 10 to 14, 17 to 21 and 24 to 28—
Concrete for architects.
August 28 to September 1—§Summer School for lecturers.
September 4 to 8 and 11 to 15—Concrete roads and cement-stabilised bases for general foremen, clerks of works and highway superintendents.
September 18 to 22, 25 to 29, October 2 to 6, 9 to 13, 16 to 20 and 23 to 27—†Concrete construction for gangers.
October 30 to November 3, November 6 to 10, 13 to 17 and 20 to 24—Structural concrete for general foremen and clerks of works.
November 27 to December 1—¶Concrete technology for engineers.

for general foremen and November 27 to Dec technology for engineers.

subscribing members only. details of course and enrolment forms from Education Secretary of the London Master Builders Association, 47 Bedford Square, W.C.I. for registered architects only. by invitation. it will be assumed that applicants for places on this course have a sound knowledge of Road Note No. 4.

BRITISH STANDARDS

Connectors for Timber

To take account of the types and sizes of connectors now generally available in this country, this British Standard (first published in 1949) has been revised under the authority of the Timber Industry Standards Committee. It was previously revised in 1953.

The principal changes in the specification (B.S.1579:1960) are the reinstatement of the malleable cast-iron shear-plate connectors, the elimination of corrugated

connectors, the elimination of corrugated toothed-ring connectors and a modification of the shape of the teeth in the round toothed-plate connectors. To reduce the possibility of confusion

resulting from reference to connectors by table numbers, each type of connector has been allotted a number and the size and sub-type are indicated by a suffix. A list of connector numbers is given in an

appendix.
Dimensions and materials Dimensions and materials of the connectors are covered, but data on the strength properties of joints made with the connectors are not included. British Standard Code of Practice, C.P.112, "The structural use of timber in buildings," contains such data relating to those connectors which are in accordance with this standard and on which authenticated tests have been carried out. Price 6s.

Copies of this British Standard may be

Copies of this British Standard may be obtained from the British Standards Institution, Sales Branch, 2 Park Street, tution, Sales London, W.1.

Talking of Safety "DRAGEE"

As we walked across the site towards the old buildings—now empty and forlorn-looking in the misty winter light—Albert Davies told me something of his early history in the demolition trade.

"I went into my uncle's business soon after I left school," he said. "I was scared stiff at the idea, but there was nothing else then, and I was glad to get the job. My ma was a widow and there were five other kids younger than me, so I had to be the perishing family hero."

perishing family hero."

Albert's Uncle Luke appears to have been a pretty tough character, and the first thing he did was to give young Albert a pick and a 14lb. hammer and send him up to strip the roof of a small condemned warehouse. Albert took one look at it and said, couldn't he have something a bit easier to start with? No, barked Uncle Luke, he damn well couldn't. Very well, said Albert, let me get my jacket and I'll go home. What, and let your mother starve to death? To say nothing of your little brothers and sisters?

So Albert took off his jacket again,

So Albert took off his jacket again, picked up the tools, climbed on to the roof, and sat behind a low parapet, shivering with fear. At nine o'clock Uncle Luke's face appeared at one of the skylights. It didn't look any kinder, but his voice was two shades quieter, which meant he could hardly be heard at the bottom of the street of the street.

"Come here Albert, lad," he bawled. When Albert reached the skylight his uncle said: "Now look here, Albert. You've taken on a man's job and you're bloomin' well going to finish it. It's only a tuppenny bit of a roof, but I'll give you a handsome bonus if you get it down by Saturday morning. I'm off to see about a job in Cardiff, and I'll be back on Saturday, twelve sharp. And if it isn't finished, you can put your jacket back on for keeps and tell that precious sister of mine to keep her brood at home." And with that he drives off in a cloud of black smoke, like Old Nick himself.
"Dragee." who is a practising safetu "Come here Albert, lad."

"Dragee," who is a practising safety engineer, would welcome subjects for discussion in this column. All names of persons mentioned in these discussions are entirely fictitious. Questions of law are expressed as the author's personal opinions and are not claimed to be authoritative.—EDITOR.

That was Monday. By the evening Albert had gingerly loosened some of the gutters and had dropped a couple of lengths into the yard. He removed some of the ridge capping the following morning. It was very hot and the slates burned his less. He looked as his handingst. ing. It his legs. his legs. He looked at his handiwork, the result of two days' sweated labour and constant terror, then decided that mother or no mother, kids or no kids, he would go home and watch them starve, and Uncle go home and waten the Luke could go to hell.

go home and watch them starve, and Uncle Luke could go to hell.

"I went home that evening and told my ma," said Albert, "I thought she'd be mad, but all she said was: 'Go and get washed and I'll get your tea. And don't worry yourself. Something else'll turn up—you see if it doesn't.' But I felt so ashamed I went back to the warehouse next day. I unlocked the little shed in the yard where we kept the gear—there were some more tools for the men who were starting on the following Monday—and then I got back on to the roof. It was still very hot, but there was rain on the way, and I worked like mad for about two hours. Then I sat down in the shade by the parapet and sweated. I cursed Uncle Luke. I almost cursed my ma and the kids. But most of all I cursed myself..."

Then it started to rain. The roof

Then it started to rain. The roof sizzled, and Albert thankfully scrambled down to the ground. He sat inside the shed and watched the torrential rain beatshed and watched the torrential rain beating against the tiny cracked window. That was the last thing he saw for several minutes as he lay stunned and oblivious of the wreckage around him: the shattered slates and the tangled purlins and rafters of the warehouse roof. There was also a fair section of the east gable torn apart, Yes, the lightning flash had done its work very thoroughly.

When his uncle returned. Albert was

When his uncle returned, Albert was still tidying up. Uncle Luke stopped the car. He got out. He gaped in astonishment. "I wouldn't have believed he'd got it in him," he murmured.

But Albert had. Those few words of unintended praise did more for him than the handsome bonus of five shillings which he was given that memorable morning, together with an extra sixpence to compensate for the large bruise on his forehead.

On the following Monday morning, Albert was working on the walls with three

other men when his uncle came and stood

other men when his uncle came and stood beside him.

"They say there was some bad weather here last week," he said, casually.

"Yes," said Albert.

"Some thunderstorms, as well," said his

uncle.

uncle.
"Yes," said Albert.
"Some people mightn't think that was bad weather, eh?"
Albert said nothing. His uncle winked at one of the men and walked away.
There is hardly a safety moral to this story except, perhaps, to point out one more good reason for wearing a helmet.

ROADWORKS SAFETY CODE Complaints Against Contractors

Traders' Road Transport Association, national body for C licence operators, have taken up with the Ministry of Transport complaints that contractors undertaking roadworks are sometimes not complying with the special safety code for roadworks laid down by the Ministry.

One complaint is that sometimes there is a failure to place a warning sign in advance of the site of repairs; another is that traffic control signals are not operated properly.

A further complaint concerns failure to remove signs when roadworks have been

remove signs when roadworks have been completed, with the result that drivers

completed, with the result that drivers become accustomed to seeing such signs and disregard them.

Mr. H. R. Featherstone, T.R.T.A. national secretary, says this inevitably lessens the value of signs which relate to genuine repairs and brings with it a risk that these also will be diregarded.

The Ministry of Transport has asked for specific instances and Mr. Featherstone has requested member-firms who can provide particulars of non-compliance with the code to contact him. They are being asked to identify sites and the name of the contractor or Government Department responsible for the work.

NIGERIA AWARDS AERIAL SURVEY CONTRACT

One of the contracts awarded by the Government of the Federation of Nigeria during the first month of independence has been won by a British aerial survey company, Fairey Air Surveys, Ltd.

The contract covers an aerial photographic programme of some 25,000 square miles in the three regions of the Nigerian Federation—East, West and North. The resultant mapping will be used in the general development of Nigeria.

The contract will involve one aircraft and a photographic and navigation team for about six months, based on the Federal capital of Lagos. As the programme develops the aircraft and its team will also operate from various centres throughout Nigeria starting at Enugu and then Benin City.

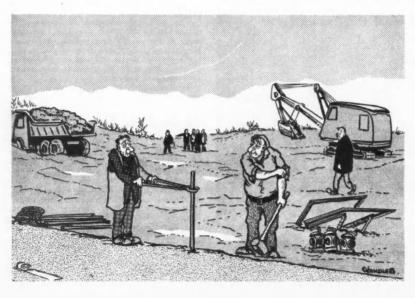
City.

The area to be surveyed is a combination of scrub, jungle and agricultural land and has gone largely unphotographed in the past because of the extremely bad weather

ALLAM FORM INDIAN COMPANY

A new company, E. P. Allam of India (Private), Ltd., has been formed by E. P. Allam and Co., Ltd., London, to supervise manufacture of the complete range of Allam vibrators for use in India.

The Indian collaborators are A. D. Dhingra, B.Sc.(Edin.), and K. K. Jaiodia, managing director of the Lynx Machinery Co. and Lynx-Ofu, Ltd. The entire manufacture of vibrators will be undertaken by Lynx Machinery Co., and the purchasing of essential materials or special items, together with the marketing of complete vibrators, compactors, etc., will be vibrators, compactors, etc., entrusted to E. P. Allam of India.



DIARY OF EVENTS, 1961

This Diary of some of the principal events to be held during 1961, will be supplemented in our weekly feature "For the Diary." The Editor would welcome details of further events as and when arranged.

January.

Tue. 3. Annual general meeting of the Yorkshire Federation of Building Trades Employers, Leeds.
Thur. 5. Annual general meeting of the Federation of Registered House-builders, London.

Annual general meeting of the Prestressed Concrete Development Group. Monsieur Y. Guyon on "Recent Projects and Works in Prestressed Concrete."
Wed. 11. Annual general meeting of the Eastern Federation of Building Trades Employers, Garden House Hotel, Cambridge.
Wed. 18. Federation of Master Builders London Region luncheon meeting for House builders, Grosvenor House, London. 1 p.m.
Mon. 23. Annual general meeting of the Liverpool Regional Federation of Building Trades Employers.

Annual general meeting of the South Wales Federation of Building Trades Employers, Cardiff.
Tue. 24. Annual general meeting of the London Master Builders Assn., Park Lane Hotel, London. 10.30 a.m.
Fri. 27. Annual general meeting of the Southern Counties Federation of Building Trades Employers, Connaught Rooms, London. 10.30 a.m.

Annual general meeting of the London Master Plasterers Assn. Annual general meeting of the ondon Master Plasterers Assn., Charing Cross Hotel, London. Charing

11 a.m.

28. Annual dinner and dance of the London branch of the Contractors' Mechanical Plant Engineers, Criterion Restaurant,

London.
Tue. 31. Annual dinner of the East
Midlands Assn. of the Institution
of Civil Engineers.

February.

Thur. 2. Annual dinner of the North Western Assn. of the Institution of Civil Engineers.

Western Assn. of the Institution of Civil Engineers,

3. Annual dinner of the Building and Civil Engineering Contractors' Section of the Birmingham and District Industrial Safety Group, Midland Hotel, Birmingham.

6. Meeting of the Society of Engineers at Geological Society, Burlington House, London. Presidential Address by Mr. W. E. Humphrey, F.S.E.

7. Annual dinner of the National Federation of Building Trades Employers, Grosvenor House, London. "Heating the Home" Exhibition, sponsored by the Eastern, North Thames, South Eastern and Southern Gas Boards, at Royal Horticultural Hall, London. Feb. 7-18. -18.

Wed. 8. Annual general meeting of the National Federation of Building Trades Employers, R.I.B.A., Lon-

. 14. Annual dinner of the Institute of Builders, Guildhall, City of London,

17. Annual dinner of the Institu-tion of Plant Engineers, Connaught Rooms, London.

r. 2. Annual dinner of the Insti-tution of Municipal Engineers, Hyde Park Hotel, London. 3. Annual dinner and dance of the South Wales Federation of Thur.

Building Trades Employers, Cardiff.
Tue. 7. Ideal Home Exhibition,
Olympia, London, March 7-April 3.

Wed. 8. Dinner of the London Build-ing and Engineering Contractors Accident Prevention Group, London. 14.

Annual general meeting and

Tue. 14. Annual general meeting and luncheon of the London Region of the Federation of Master Builders, Connaught Rooms, London. 1 p.m. Thur. 16. Annual general meeting of the Asphalt Roads Assn., London. Tue. 21. 10th Electrical Engineers (A.S.E.E.) Exhibition, Earls Court, London, March 21-25.

Wed. 22. One-day conference arranged by The Engineers' Guild: "The Professional Engineer—His Employment and Development," Connaught Rooms, London, 9.45 a.m. Thur. 23. Symposium on Lubrication Engineering arranged by the Institution of Plant Engineers at the Institution of Mechanical Engineers, London.

London.

24. Spring meeting of the Institute of Public Cleansing, Salford. Annual general meeting and annual dinner of the South Wales and Monmouthshire Section of the Federation of Civil Engineering Contractors, Royal Hotel, Cardiff.

Annual dinner and dance of the North Western Federation of Building Trades Employers, Imperial Hotel, Blackpool.

Annual dinner and dance of the Guild of Surveyors, Waldorf Hotel.

London.

Annual general meeting and luncheon of the British Assn, of Field and Sports Contractors, Dorchester Hotel, London.

Sat. 25. Annual general meeting of the North Western Federation of Building Trades Employers.

Mon. 27. "Building in the 60's" Exhibition, Livery Hall, Guildhall, London. March 27-30.

Wed. 29. Annual general meeting and

1. 29. Annual general meeting and luncheon of the National Federation of Demolition Contractors, Waldorf Hotel, London.

7. Annual dinner of the South Western Assn. of the Institution of

Western Assn. of the Institution of Civil Engineers.

10. 1st International Congress on Metallic Corrosion, Imperial College, South Kensington, London, S.W.7. April 10-15.

11. Presentation of Royal Gold Medal, Royal Institute of British Architects, Portland Place, London.

6 p.m.

6 p.m.

2nd International Refrigeration and Air Conditioning Exhibition. Earls Court, London. April 11-14.
Wed. 12. Annual general meeting of the Sand and Gravel Assn. of Great Britain at 48 Park Street, London, W.1. 2.30 p.m.
Thur. 13. Banquet of the Sand and Gravel Assn. of Great Britain, Grosvenor House, London.
Wed. 19. Annual general meeting of the Institute of Builders, Royal Festival Hall, London.

Annual conference of the Insti-

Festival Hall, London.

Annual conference of the Institution of Plant Engineers, Imperial Hotel, Blackpool. April 19-21.

Thur. 20. Engineering, Marine, Welding and Nuclear Energy Exhibition, Olympia, London. April 20-May 4.

Fri. 21. Joint conference of Architects, Quantity Surveyors and Builders, University Arms Hotel, Cambridge.

Mon. 24. International Council for Building Research Studies and Documentation Colloquium on

"Surface Finishing of Concrete" at Research and Development Station of the Cement and Concrete Assn.
Tue, 25. London Master Builders Assn.'s lunch to the Lord Mayor, Savoy Hotel, London. 12.30 p.m.
Wed. 26. Annual conference of the Assn. of Rural District Council Surveyors, Blackpool. April 26-27.
Thur. 27. Meeting of the Metropolitan and Southern branch of the Institute of Sewage Purification. Visit to Paris Sewage Treatment Works.
Fri. 28. Annual dinner and dance of the Building Surveyors Institute, Waldorf Hotel, London.

wed. 3. Summer meeting of the Institution of Water Engineers, Buxton. May 3-5.

Railway Modernisation Conference, London, arranged jointly by the Institutions of Civil, Mechanical and Electrical Engineers. May 3 and 4.

Thur. 4. Federation of Master Builders London Region tour to East and West Berlin and Hamburg. May 4-11.

London Region tour to East and West Berlin and Hamburg. May 4-11.

Mon. 8. Half-yearly meeting of the National Federation of Roofing Contractors, Bournemouth. May 8-10.

Tue. 9. Annual general meeting of the Royal Institute of British Architects, Portland Place, London. 6 p.m.

Thur. 18. Annual dinner of the Institution of Civil Engineers, London. Wed. 24. Institute of Quarrying sixth short course "Transportation of Materials." Ashorne Hill Conference Centre. May 24-27.

Mon. 29. Summer meeting of the Eastern Federation of Building Trades Employers, Clacton-on-Sea. May 29-31.

International Road Tar Con-

International Road Tar C ference, Harrogate. May 29-31. Con-

Mon. 5. Annual general meeting of Corporate Members of Institute of Public Cleansing, Music Hall, Aberdeen, 8 p.m.

Federation of Master Builders' National luncheon and annual general meeting, Connaught Rooms, London. 1 p.m. (Tentative date.)

Tue. 6. Annual conference of the Institute of Public Cleansing Aberdeen. June 6-9.

Wed. 7. Annual dinner and dance of the Reinforced Concrete Assn., Dorchester Hotel, London.

Fri. 9. Half-yearly meeting of the Yorkshire Federation of Building Trades Employers, Scarborough. June 9-11.

Yorkshire Federation of Building Trades Employers, Scarborough. June 9-11.

13. Annual conference of the Institution of Municipal Engineers, Brighton. June 13-17.

Annual general meeting of the Institution of Civil Engineers, London.

London.

Wed. 14. Annual general meeting of the Reinforced Concrete Assn., London.

London.

Building and Public Works Exhibition, Castle Bromwich, Birmingham. June 14-24.

Thur. 15. International Construction Equipment Exhibition, Crystal Palace, London. June 15-24.

Mon. 19. Annual conference and annual general meeting of the Institute of Sewage Purification, Brighton. June 19-23.

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Book Reviews

Constructional Steelwork Simply Explained.

By Oscar Faber. Fourth Edition. Publishers, Oxford University Press. Price 16s. 6d.
This is a very well-known book which has already found a place on most lists of recommended textbooks. The fourth edition has been brought up to date by the author's son, Mr. John Faber, to comply with the latest issues of British Standards 15 and 449. Chapters and appendices have been included or augmented on welding, new rolled sections and high-strength friction bolts. The free and easy style of the original work remains, but there has been some re-arrangement of subject matter from earlier editions, and all the diagrams are new. diagrams are new.

diagrams are new.

The book sets out fundamental principles in simple language. It eschews technical terminology and formulæ. The description of a tensile test on a specimen of mild steel to introduce the properties of that material is typical of the illustrative method employed by the author. There is a wealth of common sense between the covers, with practical hints gathered from Dr. Faber's wide experience. The elementary purpose of the book should not disguise its value to the advanced student. For the beginner, it is an excellent complement to the traditional type of textbook. tional type of textbook.

First Aid in the Factory. By Lord Taylor, M.D., F.R.C.P. Publishers, Longmans, Green and Co., Ltd. Price 9s. 6d. Official investigations have shown an overall lack of people trained in industrial first aid, and inadequate and inefficient first aid facilities in many, if not most, work-places. The Ministry of Labour have taken action to bring first-aid boxes more into line with modern needs. The next step into line with modern needs. The next step must be to modernise training in industrial first aid.

first aid.

To meet this need, Lord Taylor and his colleagues in the Industrial Health Service in the new town of Harlow have made a detailed survey of the work industrial first-aiders actually have to do. From this they have evolved a system of first-aid teaching which omits what is obsolete and unnecessary, and embodies fully modern experience in industrial medicine. The system has been in successful use in the factories, shops, offices and building sites of Harlow for three years. It is now made generally available in book form.

Practical Problems in Foundations, by Henry R. Reynolds, A.M.I.C.E. Pub-lishers: Crosby Lockwood and Son. Price 25s.

The author has followed up his excellent work on problems in soil mechanics—written jointly with Mr. P. Protopapadakis—with a companion volume which, unfortunately, lacks the clarity and value of the earlier book.

Designed to link the interpretation of Designed to link the interpretation of soil mechanics with the choice of foundations, the book first examines the use of the theory in foundation problems and sets out the objects of site exploration and how these objects may be achieved. Five chapters are devoted to particular types of structures ranging from dwelling houses to bridge foundation and raft foundations for heavy structures. Chapter eight in the list of contents promises information on sand piles, a favourite subject eight in the list of contents promises information on sand piles, a favourite subject of Mr. Reynolds. The text is instructive but the technique is referred to throughout, more accurately, as "sand drains." The following three sections on tunnels and sea defence works are barely within the subject matter of the title and deal only sketchily with these vast subjects. The final chapter describes some interesting and unusual problems. unusual problems.

There are numerous diagrams, charts and tables throughout the text, most of them clear and useful. It is a pity, therefore, that some, such as Taylor's diagram on page 27, should have little connection with the text which refers to them, and others, as Figure 27, should illustrate a quite unrealistic situation. The descriptions of underpinning are not clear and common faults in the ill-understood operation of shoring are perpetrated in the diagrams.

It would be interesting to know whether the author has been under an obligation to produce his book to a tight time-table. There is evidence that the text has not had the care and attention of which Mr. Reynolds is known to be capable. The treatment of foundation problems having regard to the foundations themselves rather than the structures which they are to carry would be more acceptable. And the implication that seasonal changes in moisture do not govern the depth of footings in this country is one that the author will wish to take out of the second edition. It would be interesting to know whether

WEST AFRICAN PUBLIC WORKS CONFERENCE

THE fifteenth West African Public Works Conference was held in Ibadan, Western Nigeria from November 28 to December 2, 1960. Mr. Aluko, controller of works services, Western Nigeria, was elected chairman of the conference, which was attended by delegates from Niger, Ivory Coast, Federal Nigeria, Eastern Nigeria, Gambia, Ghana, Liberia, Cameroons, Dahomey, The West African Building Research Institute and the International Road Federation.

Amongst the subjects raised at the meeting was the development of a regional road transport network for the West Coast of Africa. This subject was introduced by I.R.F. delegates who considered that the development of such a network was of the utmost importance both for the development of interregional trade and industry and for providing adequate facilities for cultural interchanges.

It was felt that the time had come for the establishment of a permanent organisation in West Africa to carry out this work and, in view of the fact that the U.N.

the establishment of a permanent organisa-tion in West Africa to carry out this work and, in view of the fact that the U.N. Economic Commission for Africa had, at its meeting in Tangier in February, 1960, put a high priority on such work in its programme, delegates suggested that the U.N. Economic Commission for Africa might be invited to establish such a body on the West Coast of Africa.

M. GUYON TO SPEAK IN LONDON

Following the twelfth annual general meeting of the Prestressed Concrete Development Group, to be held at the Royal Commonwealth Society, London, on Thursday, January 5, 1961, Monsieur Yves Guyon will give a talk on "Recent Projects and Work in Prestressed Concrete," at 5.45 p.m. In his lecture he will refer to bridges, pipes, water retaining structures, and to a number of different types of buildings.

M. Guyon, consultant to the Société Technique pour l'Utilisation de la Précontrainte, is deputy-general vicepresident of the Fédération Internationale de la Précontrainte.

Tickets for the lecture may be obtained

Tickets for the lecture may be obtained from: Philip Gooding, secretary, Prestressed Concrete Development Group, Terminal House, Grosvenor Gardens, London, S.W.1.

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Wed. 21. Official visit to Switzerland by members of the Eastern Federation of Building Trades Employers, June 21-July 5. Institution of Civil Engineers, London. "Conversazione."

London. "Conversazione."

1. 28. "Architecture Today" Exhibition, organised jointly by R.I.B.A. and Arts Council of Great Britain, at 4 St. James's Square, London, S.W.1. June 28-July 29. Wed. 28. "A

July.

Mon. 3. International Union of Architects Congress, London, July 3-7.
Tue. 4. Southern Counties Federation of Building Trades Employers' Summer Conference, Oxford. July

4-5.
Wed. 5. Building and Public Works
Exhibition, Belle Vue, Manchester.

Exhibition, Belle Vue, Manchester. July 5-15.

1. 12. Half-yearly general meeting of the National Federation of Building Trades Employers, Black-Wed. pool. July 12-14.

September.

. 5. International Packaging Exhibition, Olympia, London. Sept. 5-15. Tue.

Thur. 5. Convention on "Planning for Traffic" arranged by the Insti-tution of Municipal Engineers, Traffic" at tution of London.

London.

Meeting of the Institution of Structural Engineers, London. Presidential Address,

Mon. 9. Annual conference of the Institute of Quarrying, Palace Hotel, Torquay, Oct. 9-13.

Tue. 10. Annual dinner of the Contractors' Plant Assn., Dorchester Hotel, London.

Wed. 18. 46th International Motor Exhibition, Earls Court, London. Oct. 18-28.

Fri. 20. Annual dinner of the Yorkshire Federation of Building Trades Employers, Queens Hotel, Leeds.

Autumn general meeting of the

Autumn general meeting of the Southern Counties Federation of Building Trades Employers, Connaught Rooms, London. 10.30 a.m. 31. Annual dinner of the British Road Tar Assn., Grosvenor House, London.

Tue. London.

November.

Tue. 7. Institution of Civil Engineers, London. Presidential Address.

Fri, 10. Scottish Motor Exhibition, Kelvin Hall, Glasgow, Nov. 10-18. Mon. 13. Factory Equipment, Heating, Ventilation and Thermal Insulation Exhibition, Earls Court, London. Nov. 13-18.

Wed. 15. Building Exhibition, Olympia, London. Nov. 15-29.

Tue. 21. Annual banquet of the National Federation of Roofing Contractors, Grosvenor House, London.

Wed. 22. Annual general meeting of the National Federation of Roofing Contractors, London.

Thur. 30. Annual dinner and dance of the Institution of Water Engineers, Park Lane Hotel, London.

December.

Fri. 1. Winter general meeting of the Institution of Water Engineers, at Institution of Civil Engineers, London.

Mon. 4. Royal Smithfield and Agri-cultural Machinery Show, Earls Court, London. Dec. 4-8.

Fri. 8. Federation of Master Builders' London Region "Ladies Night." Grosvenor House, London. 6.30 p.m.

Trade and Company News

WORLD'S BIGGEST LORRY-MOUNTED CRANE FOR U.K. CONSTRUCTION WORK

TWO models of the Lorain MC-875 Motor Crane, said to be the biggest lorry-mounted crane in the world, have been imported from America by Vales Plant Register, Ltd., for work on bridge

and heavy construction projects. One has gone north to Leonard Fairclough, Ltd., at Burtonwood, Lancs., and the other to George Hardwicke and Sons, Ltd., at Ewell, Surrey.

The Lorain carrier is based on a single piece, alloy-steel casting, with mounting plate, mounting pads and fore and aft outrigger boxes all cast as an integral part of the frame. Its length is 31ft. and wheelbase, with dual front wheels, is 198in,

A 262-h.p. engine provides 10 forward speeds from 0.5 to 20 m.p.h.

With air operated clutches throughout, control of load is by the Lorain "Air Ease" 2 lever joystick backed by a Caterpillar D337F diesel with a torque converter. The load is taken on a new "Sheer-Ball" crane mounting which obviates the necessity for centre pins or turntable rollers.

The crane boom, at its maximum extension to 240ft., is claimed to be by far the longest for any lorry-mounted crane. Two booms are available for the MC-875, a regular boom and an extra-long D-3

boom. Both booms are of an all-welded, tubular open throated type constructed of high tensile steel with main chords of square tubular section. The regular boom has a basic length of up to 140ft, and a maximum extension of up to



MC-875 with D3 boom

180ft. Specimen lifting capacities are as follows:

 Boom
 Radius
 With outriggers/over back

 50ft.
 12ft.
 160,000lb.

 50ft.
 40ft.
 46,850lb.

 140ft.
 30ft.
 42,000lb.

 140ft.
 30ft.
 14,600lb.

The D-3 booms which will be imported with the MC-875 have a basic length of up to 200ft, with tip extensions up to 240ft. Specimen rated lifting capacities are as follows:

 Boom
 Radius
 With outriggers/over back

 95ft.
 20ft.
 63,000lb.

 95ft.
 90ft.
 14,950lb.

 200ft.
 40ft.
 19,000lb.

 200ft.
 120ft.
 3,600lb.

The capacity with tip extensions is the same as for the main boom at the same radius.

A high tilting and folding gantry provides for eight parts of boom derricking line and when in the lowered position the overhead clearance is no more than cab height.

The MC-875 Motor Crane is a product of the Thew Shovel Company of Ohio, U.S.A. Vales Plant Register, Ltd., 14 Lower Grosvenor Place, S.W.1, are the sole agents in the United Kingdom.

TYRE CHAINS FOR POWER SHOVELS

Chain-mail tyre guards for power shovels, which it is claimed reduce tyre replacement, practically eliminate punctures and counter any tendency for wheel spin with shovels working on refuse tips, are now available from Bray Construction Equipment, Ltd., Feltham, Middlesex.

The Granite chain, as it is known, is made from manganese steel. Its formation gives a strong tractive grip and a self-

The Granite chain, as it is known, is made from manganese steel. Its formation gives a strong tractive grip and a self-cleaning action. It gives a degree of flexibility around the tyre and is said to lay down a protective track in advance of tyre contact with the ground.

4,000LB. MOBILE LOAD-LIFT WITH NEW FRONTLOADER

A NEW model in their range of four-wheel drive shovels, the Frontloader 80A, is announced by Merton Engineering Co., Ltd., Faggs Road, Feltham, Middlesex.

This machine is powered by the Ford 590E 6-cylinder diesel engine which develops 80 b.h.p. at 1,850 r.p.m. A single

stage 3:1 stall ratio hydraulic torque converter and full power-shift epicyclic gear train transmit the drive to the driving axles which have a four pinion differential, crown and pinion spiral bevel primary reduction and final planetary reduction at the hubs, Two forward and one reverse speed give 0-4.8, 0-10.5 and 0-5.3 m.p.h. respectively.



Frontloader 80A

Hydraulic brakes are fitted to all four equal-sized wheels and are of the internal expanding shoe type with Hydrovac servo assistance. All wheels are fitted with 12.00 x 24 8-ply earthmover tyres with 13.00 x 24 tyres as optional. Steering is power-assisted to the rear wheels through a heavy duty Marles cam and double roller type steering box.

All hydraulic rams are double acting and are controlled through a valve which has detent positions to give semi-automatic "raise" and "float" for faster working. The mobile load-lifting capacity is 4,000lb. and the maximum crowd or pry-out force is 10,000lb.

The standard bucket is 7ft. 1½in. wide to cover the full width of the machine and has an S.A.E. rated capacity of 1½ cu. yd. (struck capacity 1½ cu. yd.). It is strongly reinforced with doubling plates and manganese steel wearing strips, Smaller or larger capacity buckets are available for very heavy or lighter materials.

3IN. PUMP WITH INTERCHANGE-ABLE IMPELLERS

A new pump which has been put on the market by Industrial Pumps, Ltd., 20 Bentinck Road, Hyson Green, Nottingham, has two interchangeable impellers—a high head one giving a maximum head of 90ft. and a capacity impeller giving a head of 676t.

It is the Flygt Bibo 3in. pump, of 4-h.p. which weighs less than 90lb., is fully submersible and will run indefinitely "on snore". It is to be followed shortly by a 4in. model of 7½-h.p.

Trade and Company News

NEW COMPANIES

The undermentioned particulars of new companies recently registered are taken from the daily register compiled by Jordan and Sons, Ltd., company registration agents, 116 Chancery Lane, London, W.C.2:—

Fitzhand, Ltd., contractors, £100. Directors: John M. Fitzpatrick, Junr., Patrick A. Fitzpatrick, Alex T. B. Shand and Geo. R. Gascoyne. Subscribers: E. Gilbey, 216 Makepeace Mansions, Highgate, N.6; Mrs. L. Norris, 2a Southwood Lane, N.6. John Murphy (Groundworks), Ltd., Suite 48, London Fruit Exchange, E.1, excavators and constructors of road bridges, etc. £1,000. Directors: John Murphy and Mrs. R. M. Murphy, 102 Hamilton Avenue, Tol-worth.

worth.

Walser and Son (Builders and Plumbers).

500. Directors: Oscar C. Walser (governing director) and Mrs. Gwendoline M. Walser.

St. Leonards, Denton Rise, Denton, Newhaven, Sussex.

R. J. Burns, Ltd., Burnholme, Pinehill Road, Crowthorne, Berks., builders. £1,000.

Director: Richard J. Burns, Burnholme, Pinehill Road, Crowthorne.

Road, Crowthorne, Berks., builders. £1,000. Director: Richard J. Burns, Burnholme, Pinehill Road, Crowthorne.
K.S.W. (Builders), Ltd. £100. Directors: Bronislaw Skibicki, 70 Pennywell Road. Bristol, 5; Kazimiesz P. Wasiluk, 5 Lytchett Drive, Downend, Bristol.
Rearden Plant. Ltd., 41 Chapel Street. Chorley, plant hire specialists, etc. £1,000. Directors: Wm. H. Rearden and Michael J. Rearden, Fernlea, Bolton Road, Heath Charnock, Chorley.
D. C. Bishop, Ltd., 9 Belle Bank Avenue. Holmer, Hereford, public works contractors, etc. £2,500. Permanent directors: Douglas C. Bishop and Mrs. E. M. Bishop, 9 Belle Bank Avenue, Holmer, Hereford.
E. Byng (Builders), Ltd., 13 Woodman Road. Halesowen, Worcs. £2,000. Directors: Edward Byng and Mrs. E. Byng, 13 Woodman Road. Halesowen; Eric Byng, 18 Tenter Street, Halesowen.

Halesowen; Eric Byng, 18 Tenter Street, Halesowen,
H. R. Briggs (Builders), Ltd., 850 Wimborne Road, Bournemouth. £1,000. Directors: Henry R. Briggs, 19 Bingham Road, Bournemouth; Dennis H. Ford, 14 Palfrey Road, Bournemouth.
Wager's Plant Hire, Ltd., Gamels Cottage, Rush Green, Hertford. £5,000. Directors: Kenneth Wager, Gamels Cottage, Rush Green, Hertford, Gerald W. Nix, Gamels House, Rush Green, Hertford.
H. C. Giffin and Son, Ltd., 3 Ernan Close, South Ockendon, Essex, painting contractors, etc., £100. Directors: Harry C. Giffin and Mrs. Kathleen M. Giffin, 3 Ernan Close, South Ockendon.

Ockendon.

Barnard and Sons (Builders), Ltd., 26 High-field Road, Edgbaston, Birmingham. £5,000.

Directors: Horace E. Barnard and Joan D.

Barnard, Kingswood, Old Warwick Road, Lap-worth, Warwicks.

John Laing Research and Development. Ltd. To carry out scientific research and any other activities in the fields of natural or applied science for the extension of knowledge related to any trade carried on by John Laing and Son, Ltd., etc. £1,000. Directors: To be appointed by subscribers: Subscribers: Marion Wix and Kathleen Sellers, 59-67 Gresham Street, E.C.2 (clerks).

Redington and Aly, Ltd., 29 Fairfield Avenue, Grays, builders. £2,000. Directors: Leslie A. Redington, 29 Fairfield Avenue, Grays; Harry R. B. Aly, 52 Capel Gardens, Ilford; Emma D. B. Redington and Anne E. E. Aly.

Aly.

Batchelor and Co. (Builders). Ltd., 16
London Road, Bushey, Herts. £100. Director: R. A. Batchelor, 16 London Road, Bushey.
Buckross Bros., Ltd., 16 Kirkdale Avenue.
Leeds, 12. builders. £2,000. Directors:
Alexander Buckross, 22 Prince Edward Grove,
Leeds, 12: Benito Buckross, 16 Kirkdale
Avenue, Leeds, 12: Veronica Buckross and
Mrs. Mary E. Buckross.
Mercer-Tomalin and Sons, Ltd., 6 New
Street, Runcorn, Ches., builders. £100. Directors: John W. H. Mercer, 6 New Street,
Runcorn, Norman C. Tomalin, 5 Cherry Tree
Avenue, Runcorn. Aly. Batchelor Ro

tors: John W. H. Mercer, o New Sucer, Runcorn; Norman C. Tomalin, 5 Cherry Tree Avenue, Runcorn.

S.E.C. Developments, Ltd., builders. £100. Directors: To be appointed by subscribers. Subscribers: Gavin B. Murray, 16 Park Avenue. S.W.14 (clerk); Doreen S. Arnold, 58 Old Fold View, Barnet, Herts. (secretary).

Witney Contractors, Ltd., Crawley Road. Witney, Oxon, builders and contractors. £2.000. Permanent directors: Robert J. Brickell. Winifred K. Brickell and Robert J. Brickell. Winifred K. Brickell and Robert J. Brickell. E. J. King (Eastbourne), Ltd., 63 Kings Avenue, Eastbourne, builders. £100. Directors: Eric A. King and Mrs. K. M. King, 63 Kings Avenue, Eastbourne.

Havant Plant Hire, Ltd., 32 Waterloo Road. Havant, Hants. £1.000. Directors: Ronald Prior and Mrs. K. Prior, "Pollinsa," Manor Lodge Road, Rowlands Castle, Hants.

Laughton (Sussex) Builders, Ltd., 39, Bellingham Crescent, Hove, 4, £100. Directors: Samuel Wilson, The Roebuck Inn, Laughton; Norman T. Hogg, 39 Bellingham Crescent, Hove, 4, Burrell and Wing, Ltd., builders. £1,000.

Hove, 4.

Burrell and Wing, Ltd., builders. £1,000.
Directors: James E. Burrell, Terence A. Burrell
and Alfred J. Wing, addresses not stated.
Subscribers: George A. Crook, 51 Caversham
Avenue, N.13 (company director); Emily
Faulkner, 15-17 Chichester Rents, W.C.2

Halliford Enterprises, Ltd., builders. £100. Directors: Leslie Haycraft and Margaret I. N. Haycraft, 13 Cadbury Road, Sunbury-on-

Thames,
Morgan Development Co., Ltd., 11 Everton
Road, Hordle, Hants, builders. £1,000.
Directors: Gwynn I. Morgan, Whiteoaks, 11
Everton Road, Hordle, Hants: Robert A.
Murche, 28 High Trees Avenue, Queens Park,



LARGE savings in labour costs are claimed for a new electro-magnetic welding trolley which has been developed by Melbro Machine Tools, Ltd., 2a Alexandra Road, Manchester, 15, for clamping R.S.J.s and girder sections and aligning plate sections during welding.

ELECTRO-MAGNETIC WELDING

The trolley incorporates two powerful M4 magnets and a hydraulic ram. It can exert pressures of up to five tons and is fitted with an adjustable bridge piece to accommodate stringers and R.S.J.s of all sizes up to 19½in. in height. The pressure gauge is calibrated to show the cohesion rating for various thicknesses of plates. rating for various thicknesses of plates.

Mounted on rubber-tyred wheels for easy handling, the trolley is supplied in voltages from 24 V. upwards.

LADDER-ATTACHED WORKING **PLATFORM**

A steel and aluminium platform which bolts on to a ladder, providing a working platform more than 4ft. wide, is being marketed by General Trade Equipment, Ltd., 82-90 Seymour Place, London, W.I. The platform is fitted with a V recess which allows spanning of windows, pipes and wall attachments, and also permits corners of buildings to be worked upon with safety. Hooks for paint pots are fitted and a wood insert is provided for fixing a vice.

ORDERS FOR SMITH CRANES

Thomas Smith and Sons (Rodley), Ltd., Inomas Smith and Sons (Rodley), Ltd., have received an order from the Admiralty for eight diesel shunting cranes. Four are to be of five tons capacity, two will be six-tonners and two will be 10-tonners. In addition the Admiralty have ordered two Smith 10-ton diesel-electric shunting cranes, All 10 machines are to be employed at establishments in the West Country.

Among recent overseas orders for

Among recent overseas orders for Smith machines has been one for five "21" excavators from New Zealand, and another for three "21's" from Gineo Navarro e Hijos Constructiones S.A., of Madrid.

ANGLO-AMERICAN AGREEMENT

Stothert and Pitt, Ltd., Bath, announce Stothert and Pitt, Ltd., Bath, announce that they have entered into an agreement with Ellicott Machine Corporation of Baltimore, U.S.A., for the manufacture under licence in the United Kingdom, of dredges and dredging machinery of Ellicott design. Under the terms of the agreement, Stothert and Pitt will build dredges of all sizes and types in accordance with Ellicott designs and specifications.

At the same time, Ellicott announce that

At the same time, Ellicott announce that they will be represented in a sales capacity in the United Kingdom by John Blackwood Hodge and Co., Ltd., London and Northampton.

A.E.C. TO MANUFACTURE IN PORTUGAL

A.E.C. announce the signing of an exclusive agreement with Uniao de Transportadores para Importacao e Comercio Lda., Lisbon, for the assembly and progressive manufacture of A.E.C. buses and trucks in Portugal.

This agreement follows the visit to Portugal of Mr. E. R. Hollands, director and general manager of A.E.C. (Sales). Ltd., with a team of commercial and technical representatives from A.E.C. to consult with Dr. Quintela Paixao, manager of the U.T.I.C. organisation.



f the JCB 4 excavators which formed part of an order for 20 machines for Keller Gmbh of Dusseldorf, the German distributors of J. C. Bamford (Excavators), eing shipped from King's Lynn via Rotterdam and thence by road to Dusseldorf

Current **Constructional Activities**

AWARDS PROJECTS CONTRACTS

THIS editorial feature provides readers with a comprehensive news service covering forthcoming private and public construction work. Commencing on this construction work. Commencing on this page information is given concerning future projects followed by details of tenders being invited. In the third section will be found news of tenders recommended for acceptance, tenders accepted and con-tracts awarded. Attention is also drawn the advertisements covering contracts and appointments appearing in the front part of the Journal.

BUILDING AND DECORATING (See also Housing Schemes)

(See also Housing Schemes)

Barnsley, Yorks, — B.C. recommended to appoint R. Travers, Morgan and Partners, 60 Aldermanbury, London, E.C.2, and Oscar Faber and Partners, 29 Queen Anne Street, London, W.C.I. respectively as consultants for the structure and the electrical and mechanical services in connection with the erection of police headquarters.

Bedford. — B.C. recommended to submit to Local Education Authority for approval the following minor building programme for 1961-62: Silver Jubilee S.M. School, boys' cloaks extension, £2,000; Silver Jubilee S.M. School, wo temporary classrooms, £3,750; Goldington Green C.P. School, two temporary classrooms, £3,750; Goldington Green C.P. School, two temporary classrooms, £3,750; Pearcey Road C.P. School, school kitchen (building) hall, £18,000; Queens Park Infants' School, staff room and M.I. room, £1,000; Nemphill Road Infants' School, staff room and M.I. room, £1,000; Putnoe C.P. School, playing field extension, £2,000; Putnoe C.P. School, playground extension, £700; Silver Jubilee S.M. Boys' School, staff room and extension, £2,000.

Chelsea. — B.C. recommended to appoint

£2,000.

Chelsea. — B.C. recommended to appoint Eric G. Lynde, 41 Russell Square, London, W.C.l. as quantity surveyors for the development of the Christiania Wharf for depot purposes and invite tenders for first stage.

Depwade, Norfolk. — R.D.C. to purchase land at Long Stratton as a site for new council offices.

offices.

Friern Barnet, Middx.—C.C. recommended to approve the erection of a clinic on land at the junction of Colney Hatch Lane and Sutton Road.

Leamington Spa. War.—B.C. recommended to approve the establishment of a multi-storey car park on an island site in Satchwell Street; approve in principle, scheme and obtain tenders for improvements to 16 properties in Union Walk and erection of 20 garages. etc., at Shrubland Street recreation ground. Estimated cost £8.770 and £6.873 respectively.

Leicester.—Public Cleansing and Baths

Estimated cost £8.770 and £6.873 respectively. Leicester. — Public Cleansing and Baths Committee have approved revised plans for public baths at corner of Ring Road and St. Peter's Lane. Estimated cost £380.000. Lytham St. Annes, Lanes. — B.C. recommended to prepare revised scheme for the erection of an ornamental wall in rustic brickwork at rear of boating stage at Fairhaven Lake.

work at rear of boating stage at Fairhaven Lake.

Middlesex.—C.C. recommended to submit to Home Office for approval the following 1961-62 programme: Turners Hill. Cheshont—extension to training centre, £3.000; Faigrs Road Feltham—garage for Civil Defence vehicles and ambulances, £6.000; Divisional Training Ground, Yeading—further extension of facilities, £2.200; Sunbury-on-Thames—new training centre and ambulance garage at Green Street, £8.500; Harrow—improvements to vehicular access and provision of car park at Sancroft Road, £2.900; Harrow—new training centre at Great Stammore sewage farm, £4,100; Brentford and Chiswick—new training centre, £3.000; Southall—new training centre, £3.000; Southgate—extension to Bowes Road Training Centre and existing access, £1,300; Willesden—new training centre, £10.000.

Nuneaton, War.—B.C. recommended to approve plans for extension to factory premises at Oaston Road, for Mordun (Engineering), Ltd.; car showroom, repair garage and service station at corner Abbey Green/Central Avenue Gardens; extension of factory

premises at King Edward Road, for Freeman and Proctor; use of land for erection of new church and vicarage at St. Nicholas Park estate for Fred Pallett, Ltd., 96 Dugdale Street; proposal for new divisional police headquarters and magistrates' courts in Vicarage Street, for C.C.

Ossett, Yorks.—Town Planning Committee have approved, subject to conditions, scheme for the erection of a petrol filling station and repair garage at Prospect House Site, Manor Road (Station Road, for Hammonds United Breweries, Ltd., The Brewery, Tadcaster.

Portsmouth.—City Council to appoint a private architect to prepare drawings for the proposed new divisional police headquarters at Kingston Crescent, North End.

Sandy, Beds.—Co. Planning Officer has approved U.D.C.'s scheme for garages at Longfield Road.

Walsall. Staffs.—B.C. recommended to

proved U.D.C.'s scheme for garages at Longfield Road.

Walsall, Staffs.—B.C. recommended to apply for sanction to borrow £190.000 for a further instalment of the Digbeth/High Street redevelopment scheme, comprising the erection of 11 shops on the south side of Digbeth (between Lower Hall Lane and the Carlton Hotel), one shop on the north side of Digbeth (The Talbot block), an office block at Lower Hall Lane between the Arcade and Newport Street, and the provision of public conveniences and a car park.

B.C. recommended to appoint C. C. Gray. 15 Bridge Street, as architect, for the erection of a public hall at Bloxwich. Estimated cost £55.000.

ELECTRICAL

ELECTRICAL

Barnsley, Yorks.—B.C. recommended to approve for inclusion in 1961-62 programme, scheme for the modernisation of passenger lifts at the Town Hall. Estimated cost £4,600, Exeter.—City Council recommended to approve, subject to M.T. approval and grant aid, scheme for the installation of pedestrian operated signals, etc., at junction of High Street/Queen Street. Estimated cost £2,662. Feltham, Middx.—C.C. recommended to approve, subject to M.T. approval and grant aid, scheme for installation of automatic traffic control signals at junction of Hampton Road West, Hounslow Road and Uxbridge Road. Estimated cost £1,075.

Twickenham, Middx.—C.C. recommended to approve, subject to M.T. approval and grant aid, scheme for the installation of traffic control signals at junction of London Road. York Street and King Street, Estimated cost £8,291.

GAS AND WATER SUPPLY

GAS AND WATER SUPPLY
Barnsley, Yorks.—B.C. recommended to approve in principle, scheme for the provision of a permanent supply of water at the golf course. Estimated cost £1,100.

Leamington Spa, War.—B.C. recommended to approve scheme for the construction of a water main from Campion Hills service reservoir to Eden Court and re-laying 4in, main in Binswood Avenue. Estimated cost £2,100 and £1,144 respectively.

Wymondham, Norfolk.—U.D.C. have approved a piped water supply scheme for Silfield. Estimated cost £3,000.

HOUSING SCHEMES

Chelsea.—B.C. recommended to appoint Eric G. Lynde, 41 Russell Square, London, as quantity surveyor for the conversion of 72, 74, 76, 102, 104 and 106 Elm Park Gardens into 22 flats.

Farnworth, Lancs.—B.C. recommended to approve draft plan for a further 85 dwellings at Plodder Lane South 2 site.

Isle of Ely.—C.C. have approved revised design for two bungalows at Ransonmoor Farm. Doddington. Estimated cost £4,500.

Leamington Spa, War.—B.C. recommended to grant planning permission, subject to conditions, for outline application to redevelop site of 44 Wiles Road and 69 Russell Terrace with flats and lock-up garages for the financial secretary, London Missionary Society, Livingstone House, 11 Carteret Street, London S.W.1.

Ossett Vorks—B.C. recommended to incommended to secretary vorks—B.C. recommended to income the secretary of the secretary.

S.W.I.
Ossett, Yorks.—B.C. recommended to invite tenders for the erection of bungalows at Crownlands Lane.
Swinton and Pendlebury, Lanes.—B.C. recommended to appoint Ernest R. Babbs and Sons. 66 Moseley Street, Manchester, 2, as quantity surveyors for the Folly Lane scheme.

ROADS, BRIDGES AND SITE WORKS

Barnsley, Yorks.—B.C. recommended to approve in principle layout scheme for the crematorium site.

Hanworth, Middx.—C.C. recommended to approve, subject to Ministry approval and grant aid, scheme for the construction of part of Great Chertsey Road, from the Hope and Anchor P. H. to Sunbury Cross, Estimated cost £1,730,000.

Heston and Isleworth, Middx.—C.C. recommended to approve, subject to M.T. approval and grant aid, scheme for the widening of Upper Sutton Lane, Hounslow, between Sutton Road and the Great West Road, Estimated cost £16,000.

Hornsey, Middx.—C.C. recommended to approve, subject to M.T. approval and grant aid, scheme for the widening of High Street. Highgate, between junction of Southwood Lane and West Hill. Estimated cost £3,850.

Leamington Spa, War.—B.C. recommended to apply for sanction to borrow £14,523 for the construction of roads and sewers in the Althorpe Street clearance area.

North Riding.—C.C. to carry out the following road schemes:—Completion of road works at Noddle Hill on the York-Stamford Bridge Road, £16,000: widening between Marton and top of Dixon's Bank, £30,000; construction of traffic circus on Marton Moor East Road, £20,000; diverting the southern approach to Wensley Bridge, £9,000; and widening portion of Station Road, Cayton, £2,000.

Portsmouth.—City Council recommended to approve in principle scheme for development of Point Battery to include the provision of a sea wall promenade from the Square Tower to link-up via the Round Tower with Tower Street and the partial demolition of the Magazine and another building. Estimated cost £50,000.

Portsmouth.—Roads, Works and Drainage Committee have approved the making-up of Burrield Road, from Eastern Road to Dundas Lane, Copnor.

Southall, Middx.—C.C. recommended to approve, subject to M.T. approval and grant aid, scheme for superplevating and and scheme for superplevating.

Burrfield Road, from Eastern Road to Dundas Lane, Copnor.

Southall, Middx.—C.C. recommended to approve, subject to M.T. approval and grant aid, scheme for superelevating and resurfacing at junction Tentelow Lane, Norwood Road, A.3005. Estimated cost £12,100.

Willesden, Middx.—C.C. recommended to approve, subject to M.T. approval and grant aid, scheme for resurfacing of Church Road, A.407 (part). Estimated cost £4,080.

SEWERAGE, SEWAGE AND REFUSE DISPOSAL

Barnsley, Yorks.—B.C. recommended to approve surface water drainage scheme for Grange Lane area. Estimated cost £35,000.

Droxford, Hants.—R.D.C. to submit to Ministry for approval, sewerage schemes for Wickham and for the southern end of Waltham Chase. Estimated cost £133,900.

Exeter.—City Council recommended to apply for sanction to borrow £340,000 for construction of first stage of the St. Thomas surface water sewerage scheme and £2,530 for piping remainder of stream at Birchy Meadow.

Havant and Waterloo, Hants.—U.D.C. have

Meadow.

Havant and Waterloo, Hants.—U.D.C. have submitted to the Ministry for approval, a surface water drainage scheme for the whole of Lovedean, Cowplain and Waterlooville

Marshland, Norfolk.—R.D.C. to proceed with sewerage scheme for the parishes of Clenchwarton and Terrington St. Clement.
Swaffham. Norfolk.—C.C. have approved in principle, U.D.C.'s sewerage and sewage disposal scheme for Gooderstone. Estimated

cost £23,510.

STREET LIGHTING

Bedford.—B.C. recommended to prepare detailed scheme and invite tenders for the installation of group A lighting in Park Avenue (between Foster Hill Road and Kimbolton Road) and in De Parys Avenue. Estimated cost £6,000.

Estimated cost £6,000.

Great Yarmouth, Norfolk.—Finance Committee recommended to approve scheme for the replacement of columns and fittings in the street lighting of North Drive between Barnard Avenue and Jellicoe Road and over Jellicoe Bridge. Estimated cost £4,300.

Walsall, Staffs.—B.C. recommended to apply for sanction to borrow £21,870 for the erection of electric lamps in residential roads.

CONTRACTS

Full details of the Contracts marked *ill be found in our Adertisement Columns.

BUILDING AND DECORATING (See also Housing Schemes)

Armagh.—Supply and erection of structural steelwork at Tandragee County Intermediate School for Co. E.C. Documents from Committee's Architect, 9 Beresford Row, The Mall, Armagh. Deposit £2 2s. Tenders by Jan. 10.

mittee's Architect, y Berestoria Roy, Aire Mall, Armagh. Deposit £2 2s. Tenders by Jan. 10.

Audenshaw, Lancs.—Improvement works to six cottage houses for U.D.C. Documents from the Clerk, Council Offices, Ryecroft Hall, Audenshaw. Tenders by Jan. 14.

Belfast.—Erection and completion of three new classrooms at Royal Academy, Cliftonville Road for Board of Governors. Documents from Allan Dorman, chartered architect, 8 Elmwood Avenue, Belfast. Deposit £5. Tenders by Jan. 12.

*Blackpool, Lancs.—Construction of food technology block for B.C. Apply by Jan. 2.

Bury, Lancs.—Alterations to the public abattoirs for B.C. Documents from Borough Engineer, Town Hall, Bury. Deposit £2. Tenders by Jan. 9.

*Cambridge.—Lammas Land paddling pool and Coldham's Common swimming pool for City Council. Deposit £2 2s. each. Tenders by Jan. 25.

Dover. — Repair and redecoration of three houses in the Dour Street and Maison Dieu Road area for B.C. Documents from the Borough Engineer, Brook House, Dover. Tenders by Jan. 9.

Borough Engineer, Brook House, Dovert Tenders by Jan. 9.

Dungannon, Tyrone.—Following work for R.D.C.: Plumbing contraets—(1) internal plumbing installation in 23 semi-detached houses at Mullaghadrolly, Granville; (2) internal plumbing installation in 8 semi-detached houses at Mullaghtiege, Bush; (3) internal plumbing installation in a single house at Creevelough, Minterburn; (4) internal plumbing installation in a single house at Creevelough, Minterburn; (4) internal plumbing installation in a single house at Creevelough, Minterburn; (4) internal plumbing installation in a single house at Contracts—(1) electrical installation in 23 semi-detached houses at Mullaghadrolly, Granville; (2) electrical installation in 8 semi-detached houses at Mullaghtiege, Bush. Deposit £1 ls. each. Tenders by Jan. 12.

Deben, Suffolk.—Erection of a stores build-

detached houses at Mullaghtiege, Bush. Deposit £1 ls. each. Tenders by Jan. 12.

Deben, Suffolk.—Erection of a stores building and incidental works at Ufford for R.D.C. The building will be approximately 72ft. long by 14ft. 6in. wide in 9in. brickwork, and there will be other incidental work consisting of drainage, short length of concrete access road and builders work in connection with petrol pump installation. Applications to the Engineer and Surveyor, Council Offices, Melton Hill. Woodbridge. Deposit £2 2s. Tenders by Jan. 18.

Folkestone, Kent.—Following for B.C.: Contract 1 (a)—alterations to kitchen; contract 1 (b)—installation of hot water system including electric water heater and wash-hand basin; installation of electric power points. The number of houses included in this first stage is 49. Documents from the Borough Engineer. Municipal Offices, Folkestone. Tenders by Jan. 13.

Gloucestershire.—Construction of approximately 400 lin. yd. of Cotswold dry stone wall at Troopers Lodge, 3½ miles west of Moretonin-Marsh, for C.C. Application to the County Surveyor, Quay Street, Gloucesters. Tenders by Jan. 16.

"Guildford. Surrey.— Construction of

in-Mais Surveyor, Tan. 16.

in-Marsh, for C.C. Application to the County Surveyor, Quay Street, Gloucester. Tenders by Ian. 16.

*Guildford, Surrey. — Construction of Woking Road depot for B.C. Tenders by Feb. 6.

*Halifax, Yorks.—Erection of new school for B.C. Apply by Jan. 5.

*Hendon, Middx. — Building wooks at county primary schools for B.C. Apply by Jan. 12. Deposit £2 2s. Tenders by Jan. 30.

Holland.—Following works for C.C.: (a) One four-bay fire station, drill yard, hose-drying and drill tower, brigade stores and offices, together with six houses to be built on a site at Robin Hood's Walk, Boston; (b) Carlton Road County Junior School, Boston—provision of two classrooms, ancillary accommodation and reorganisation of the heating in the existing school. Documents from the County Architect, County Hall, Boston, Lines. Tenders by Ian. 30.

Holland.—Internal and/or external painting of the following schools for C.C.: Boston Park Junior and Infants; Boston St. Thomas V.C.P.; Deeping St. Nicholas (Tongue End) C.P.: Donington Cowley's Secondary V.C.; Gosberton C.P.; Holbeach Bank County; Holbeach Infants; Kirton Church End C.P.; Spalding Gloed Boys' and Girls' Secondary; Spalding Gloed Boys' and Girls' Secondary; Spalding Gloed Boys' and Girls' Secondary; Spalding Grammar V.A.; Spalding St. John's V.A.P.; Spalding St. Matthew's V.C.P.; Sutton St. James C.P.; Whaplode Saracen's Head C.P.; Wigtoft V.A.P. Documents from the County Architect, County Hall, Boston, Lincs. Tenders by Jan. 31.

Huntingdonshire. — Ramsey Secondary Modern School—completion for Co. E.C. Applications to S. M. Holloway, county architect, County Buildings, Huntingdon, by noon, Jan. 11. Tenders by Feb. 15.

Ilford, Essex.—Construction of extensions to sports pavilion, Hainault Recreation Ground, for B.C. Applications in writing to the Borough Engineer, Town Hall, Ilford. Deposit £2 2s. Tenders by Jan. 24.

Ipswich, Suffolk.—Proposed Gusford Primary School: Erection of a new primary school to be situated off Belstead Road for B.C. Applications to Johns, Slater and Haward, architects, 32 Foundation Street, Ipswich, by Jan. 6. Deposit £3 3s., cheque payable to Corporation. Tenders by Feb. 16.

Isle of Man.—Builders work in connection with a passenger lift at Ballamona Hospital, Braddan, for Health Services Board. Applications to Kay and Gill, architects and surveyors, 22 Athol Street, Douglas. Deposit £2 2s. Tenders by Jan. 10.

Kincardineshire.—Erection of a public convenience at St. Cyrus for C.C. Documents from the office of the County Architect and Planning Officer, Westfield House, Stonehaven. Tenders by Jan. 10.

Littlehampton, Sussex.—Painting the exterior of the Council Offices, Manor House, for U.D.C. Documents from the Engineer and Surveyor, Council Offices, Littlehampton. Deposit £1 Is. Tenders by Jan. 19.

Liverpool.—Extensions to Fulwood Park Nursery for City Council. Documents from City Architect and Director of Housing, Blackburn Chambers, Dale Street, Kingsway, Liverpool.—Extensions to Fulwood Park Nursery for City Council. Documents from City Architect and Director of Housing, Blackburn Chambers, Dale Street, Kingsway, Liverpool.—Extensions to Fulwood Park Nursery for City Council. Documents from City Engineer and Surveyor, Municipal Buildings, Liverpool, 2. Tenders by Jan. 5.

Liverpool.—Hacking and pointing at Westminster House for City Council. Documents from City Engineer and Surveyor, Municipal Buildings, Liverpool, 2. Tenders by Jan. 18.

Mablethorpe and Surveyor, Municipal Buildings, Liverpool, 2. Tender

Writing to the City Architect, 18 Cloth Market, Newcastle upon Tyne, 1. Tenders by Feb. 1.

Northern Ireland.—Following work in connection with a new extension to provide office accommodation in Belfast for hospitals authority: (a) Demolition work; (b) piling and foundation work; (c) supply and erection of structural steel work. Applications to the Secretary, Northern Ireland Hospitals Authority. 27 Adelaide Street, Belfast, by 5 p.m., Jan. 9.

Pewsey, Wilts.—Modernisation of 9 to 12 Alton Road, Wilcot, for R.D.C. Documents from the Engineer and Surveyor, Council Offices, Pewsey. Tenders by Jan. 13.

Spalding, Lincs.—Extension of the masters' common room and toilet facilities at the Spalding Grammar School, for the governors. Work is to be commenced during the summer term and completed by September. 1961. Documents from Ruddle and Wilkinson, architects, 32 Hall Place, Spalding, Tenders by Jan. 30.

Swansea.—Erection of open air classrooms at Grange Country Primary School. West Cross.

Documents from Ruddle and Wilkinson, architects, 32 Hall Place, Spalding. Tenders by Jan. 30.

Swansea.—Erection of open air classrooms at Grange County Primary School, West Cross, for B.C. Documents from Vaughan and Ridgewell, chartered architects, 1 St. James Gardens, Swansea. Deposit £2 Tenders by Fab. 6.

Whiston, Lancs.—Erection of public conveniences at Knowsley Lane, Knowsley, and Church Road, Halewood, for R.D.C. Documents from the Engineer and Surveyor, Council Offices, Delph Lane, Whiston, Prescot. Deposit £2 2s., cheque payable to R.D.C. Tenders by Jan. 25.

Wirral, Ches.—Erection of a boundary wall and gate pillars at Ridgewood Park, Fishers Lane, Pensby, contract 291, for U.D.C. Applications in writing to the Engineer and Surveyor. Council Offices, Heswall. Tenders by Jan. 14.

West Riding.—Proposed alterations to form new toilets at Golcar Wellhouse County School, for C.C. Documents from the office of the Divisional Architect, Flint Street, Huddersfield, Tenders by Jan. 9.

West Riding.—Builder's work in installation of bedilift and internal adaptations at the County Welfare Establishment, Stanley View, Wakefield, Or C.C. Applications to the Divisional Architect, Bishopgarth, Westfield Road, Wakefield. Tenders by Jan. 16.

West Riding. — Kitchen alterations at Brierley Grimethorpe Secondary School for C.C. Applications to the Divisional Archi-tect, Bishopgarth, Westfield Road, Wakefield. Tenders by Jan. 9.

CLOTHING AND TEXTILES

CLOTHING AND TEXTILES

Hamilton, Lanarks.—Supply of police uniforms for B.C. Documents from Chief Constable, 13 Clydesdale Street, Hamilton. Tenders by Jan. 13.

Northumberland. — Supply of ambulance service uniforms and uniform caps for the period April 1, 1961, to March 31, 1963, for C.C. Documents from the County Medical Officer, County Hall, Newcastle upon Tyne, 1. Tenders by Jan. 3.

*Oxford.—Supply of police uniform for City Council. Tenders by Jan. 25.

DEMOLITION

Aldershot, Hants.—Demolition and clearance of the mansion and outbuildings at Aldershot Park for B.C. Documents from the Borough Engineer and Surveyor, Town Hall, Aldershot. Deposit £1 ls. Tenders by Jan. 10.

Cheshire.—Demolition of premises 504-510 London Road, Davenham, near Northwich, for C.C. Documents from C. G. Day, county surveyor, County Surveyor's Department, Backford Hall, near Chester. Deposit £2 2s., cheque payable to C.C. Tenders by Jan. 5.

Sheffield, Yorks.—Complete demolition and removal of the premises comprising of the Central Picture House and 73 and 75 The Moor, for City Council, Documents from the Estates Surveyor, Town Hall, Sheffield, 1. Deposit £2 2s., cheques to City Council. Tenders by Jan. 16.

ELECTRICAL

ELECTRICAL

Luton, Beds. — Electrical installations, clinics at Gooseberry Hill and Leagrave High Street for B.C. Documents from the Borough Architect, Town Hall, Luton. Tenders by Jan. 10.

Newcastle upon Tyne.—Following installations required in the Home for Aged Persons, on section D, Montagu Estate, for City Council: (i) Electrical installation; (ii) heating, hot and cold water, gas installation and ventilation equipment; (iii) one electrically operated automatic passenger lift. Applications in writing to the City Architect, 18 Cloth Market, Newcastle upon Tyne, 1. Tenders by Feb. 27.

Radnorshire. — Installation of a passenger lift in the County Hall, Llandrindod Wells, for C.C. Documents from the County Architect, County Hall, Llandrindod Wells. Tenders by Jan. 13.

FENCING

Ampthill, Beds.—Supply and erection of some 360yd. of 6ft. high chain link fence and gates at the Brogborough refuse tip for R.D.C. Documents from the Engineer and Surveyor, The Limes, 12 Dunstable Street, Ampthill, Bedford. Tenders by Jan. 16.

East Dereham, Norfolk.— Supply and erection of approximately 130yd. of concrete post and chain link fencing and sundry labours to the new road frontage at Littlefields Lane, for U.D.C. Applications to Tuthill and Burton. architect and surveyors, 4b Market Place Dereham. Tenders by Jan. 9.

Liverpool.—Supplying and erecting steel

Liverpool. — Supplying and erecting steel angle fencing at St. Paul's C.E. School, Byles Street, for City Council. Documents from City Engineer and Surveyor, Municipal Buildings, Liverpool, 2. Tenders by Jan. 5.

GAS AND WATER SUPPLY

Bath. — Following at Oakford pumping station for corporation waterworks: (a) submersible pumping plant and switchgear; (b) magnetic water meter with associated integrator/recorder; and (c) 6in. dall tube with integrating and recording flow meter. Documents from the City and Waterworks Engineer, 8a Terrace Walk, Bath. Deposit £2 2s. Tenders by Jan. 10.

Diss. Norfolk.—Water supply. contract 3.

Ba Terrace Walk, Bath. Deposit £2 2s. Tenders by Jan. 10.

Diss, Norfolk.—Water supply, contract 3, for U.D.C. Sinking and proving of an 18in. diameter borehole lined for a depth of 170ft. and unlined for a further depth of 230ft, at Diss waterworks, together with other incidental works. Documents from A. P. I. Cotterell and Son, engineer, 54 Victoria Street, Westminster, S.W.I. Deposit £3 3s. Plans also seen at the Council Offices, Diss. Tenders by Jan. 9.

Harogate, Yorks.—Following work for Clapo Water Board: (1) Construction of a small brick and cast stone booster pumping station; .2) excavation and refilling of approximately 1,650 lin. yd. of trench for a 3in diameter water main to be laid by the Board. Documents from the Engineer to the Board, Municipal Offices, Harrogate. Tenders by Jan. 16.

Mablethorpe and Sutton, Lincs.—Laying of 490 lin. yd. 5in. diameter asbestos-cement pressure pipe water main and ancillary fittings, in Theddlethorpe Road, Mablethorpe, for U.D.C. Documents from the Council Offices, Mablethorpe. Deposit £1 ls. Tenders by Jan. 9.

Mablethorpe. Deposit £1 1s. Tenders by Jan. 9.
Preston, Lancs.—Laying of approximately 3,400yd. of 18in. and 12in. diameter asbestoscement mains, together with short lengths of 18in. diameter spun-iron pipes under proposed Motorway and 15in. asbestos-cement over new railway footbridge, all within the Urban District of Leyland (Contract 2), for Preston and District Water Board. Documents from J. F. Bailey, engineer and manager, Preston and District Water Board, Municipal Building, Preston. Deposit £5. Tenders by Jan. 20.
*West Cornwall.—Drift water scheme, contract 7, for Water Board. Deposit £5. Tenders by Jan. 30.
*West Cornwall.—Hayle water scheme, contract 11, for Water Board. Deposit £5. Tenders by Jan. 30.

HEATING AND VENTILATING

HEATING AND VENTILATING
Clutton, Som.—Hot water installations
(back boilers) at 1 to 26 The Mead, for R.D.C.
Documents from the Housing Manager,
Council Offices, Temple Cloud, near Bristol.
Tenders by Jan. 18.
*Ilford, Essex.—Kitchen ventilation at South
Park School for B.C. Deposit £2 2s. Tenders
by Jan. 24.
Wisbech, Cambs.—Installation of domestic
hot water systems to 141 houses, consisting
of gas or electric water heater, wash-hand
basin and necessary plumbing, for B.C. Documents from the Borough Engineer, Church
Terrace, Wisbech. Tenders by Jan. 23.

HOUSING SCHEMES

Barrow-in-Furness, Lanes.—Thirty-two flats in eight blocks, Carr Lane, Walney, for B.C. Documents from the office of J. N. Flitcroft, borough engineer and surveyor, Town Hall, Barrow-in-Furness. Deposit £2 2s. Tenders by Jan. 25.

Bradford, Yorks.—Erection of 10 dwellings in two terrace blocks, with necessary site works, at Old Park Road, Thorpe Edge estate, for City Council. Documents from the offices of the City Engineer and Surveyor, Town Hall, Bradford. Deposit £2 2s. Tenders by Jan. 24.

Docking, Norfolk.—Erection of six bungalows, together with incidental works, at Bluestone, South Creake, for R.D.C. Documents from G. E. Gibson, surveyor and housing officer, Council Offices, Docking, King's Lynn. Deposit £2 2s. Tenders by Jan. 18.

High Wycombe, Bucks—Erection of 34.

Docking, Norfolk.—Erection of six bungalows, together with incidental works, at Bluestone, South Creake, for R.D.C. Documents from G. E. Gibson, surveyor and housing officer, Council Offices, Docking, King's Lynn. Deposit £2 2s. Tenders by Jan. 18.

High Wycombe, Bucks.—Erection of 34 pairs of traditional-type houses and 60 brick garages on the Hicks Farm estate, for B.C. Documents from J. A. Parkinson, borough engineer and surveyor, Municipal Offices, High Wycombe. Tenders by Jan. 16.

Liverpool.—Construction of 183 dwellings and 71 garages, Longmoor Lane, for City Council. Documents from City Architect and Director of Housing, Blackburn Chambers, Dale Street, Kingsway, Liverpool 2. Deposit £2 2s., payable to City Treasurer. Tenders by Jan. 12.

Melford, Suffolk.—Erection of one block of three one-bedroom bungalows and one block of six three-bedroom houses at Bures St. Mary, and one block of five one-bedroom bungalows at Stoke-by-Nayland, for R.D.C. Documents from Hughes and Bicknell, architects, Tunwell's Court, Trumpington Street, Cambridge, Deposit £2 2s. Tenders by Jan. 18.

Pewsey, Wilts.—Erection of three pairs of two-bedroom bungalows and the construction of main site works on the Netheravon housing estate for R.D.C. Documents from the Engineer and Surveyor, Council Offices, Pewsey. Tenders by Jan. 13.

Stockport, Ches.—Following for B.C.: (1) One pair of semi-detached houses at Aguith Street, Reddish; (2) one pair of semi-detached houses at Marton Green, Adswood; (3) one pair of terraced houses at Dialstone Lane, Offerton: (4) adaptations to main building, High School for Girls, Cale Green; and (5) electrical installation to 47 maisonnettes and flats in one block of three storeys, Victoria Park (contract I). Documents from Borough Architect, Town Hall, Stockport. Tenders by Feb. 6 for (1), (2), (3) and (5), and Feb. 8 for (4).

Swaffham, Norfolk.—Construction of four two-bedroomed bungalows (type 59), in the Parish of Oxborough, for R.D.C. Documents from W. A. J. Spear, architect, 36 Cattle Market Stre

*Warminster and Westbury, Wilts. — Old people's bungalows for R.D.C. Deposit £2 2s. Tenders by Jan. 23.

MATERIALS AND SUPPLIES

Aberdare, Glam.—Following for the year ending March 31, 1961, for U.D.C.: (i) From manufacturers and suppliers of repute, for the supply and delivery of—(1) building sand; (2) common and facing bricks; (3) Portland cement and lime; (4) glass; (5) dry road metal and tarmacadam; (6) road tar and bitumen compounds; (7) concrete kerb and paving slabs; (8) bass and soft sweeping brooms; (9) paint brushes; (10) solder; (11) coal and coke; (12) small tools; (13) manhole and inspection frames and covers and gully gratings and frames; (14) electric lamps; (15) tyres; (ii) from experienced contractors for the execution of—(1) road resurfacing works; (2) road retread works; (3) surface dressing works; (4) cleaning and scraping of water mains. Documents from the Engineer and Surveyor, Vestry Hall, Aberdare. Tenders by Jan. 20.

mains. Documents from the Engineer and Surveyor, Vestry Hall, Aberdare. Tenders by Jan. 20.

Bangor, Down.—Supply and delivery of the following for one year from April 1, 1961, for B.C.: (1) Hardware, etc.; (2) scavenging brushes and brush shafts; (3) toilet paper; (4) precast concrete fags; (5) precast concrete kerbs; (6) road-binding materials; (7) tarmacadam, stones, etc.; (8) petrol; (9) fuel oils; (10) ashbins; (11) sulphate of alumina; (12) surface dressing and tarmacadam surfacing, etc.; (13) sand; (14) feeding stuffs (wheat and canary mixture); (15) pedestrian crossing markings, white and

feeding stuffs (wheat and canary mixture); (15) pedestrian crossing markings, white and yellow lines and letters. Documents from T. B. Graham, town clerk, Town Hall, The Castle, Bangor. Tenders by Jan. 17.

Boston, Lincs.—Supply and delivery of the following for 56 dwellings for B.C.: (1) Baths; (2) electrical works; (3) fireplaces; (4) lavatory basins; (5) radiators; (6) sinks; (7) tiled surrounds; and (8) water closet suites. Documents from the Borough Engineer and Surveyor, Municipal Buildings, Boston. Tenders by Jan. 5.

Boston, Lincs.—Prime-cost items for 56 dwellings, supply and delivery of the following for B.C.: (1) Baths; (2) electrical works; (3) fireplaces; (4) lavatory basins; (5) radiators; (6) sinks; (7) tiled surrounds; (8) water closet suites. Documents from the Borough Engineer and Surveyor, Muncipal Buildings, Boston. Tenders by Jan. 5.

*Breconshire.—Annual tenders for C.C. Tenders by Jan. 26.

*Carmarthenshire.—Supply of materials for C.C. Tenders by Jan. 27.

*Cheltenham, Glos.—Annual stores for B.C. Tenders by Jan. 14.

*Cheshire.—Supply of materials and services for C.C. Tenders by Jan. 16.

*Hayes and Harlington, Middx.—Annual contracts for C.C. Tenders by Jan. 16.

*Hayes and Harlington, Middx.—Annual contracts for C.C. Tenders by Jan. 18.

*Isle of Ely.—Supply of materials and services for C.C. Tenders by Jan. 18.

*Isle of Ely.—Supply of materials and services for C.C. Tenders by Jan. 18.

*Isle of Ely.—Supply of materials for C.C.: (1) Dry whinstone and limestone; (2) dry slag, sand and gravel; (3) tarred, bituminous and wet-mix limestone and slag, with alternative quotation for machine laying complete; (4) asphalt road-surfacing material, with alternative quotation for machine laying complete; (5) tar, pitch, bitumen and cold emulsions; (6) cement; (7) pressure creosoted timber fencing, gates, gate posts and ironwork; tubular steel gates and gate posts; (8) concrete kerbs, flags, posts and rails; (9) concrete pipes, tubes and gullies; (10) salt glazed ware pipes and gullies; (11) mo

*St. Marylebone.—Tenders for supplies for B.C. Tenders by Jan. 18. *Slough, Bucks. — Annual tenders for B.C. Tenders by Jan. 18.

*Southgate, Middx.—Supply of materials for B.C. Tenders by Jan. 23.

Stockport, Ches.—Supply and delivery of the following for the period April 1, 1961, to March 31, 1962, for B.C.: Spun-iron pipes, cast-iron special castings and cast-iron flanged fittings; asbestos-cement pressure pipes and concrete lined specials; non-ferrous saddles for service connections; sluice valves; fire hydrants, valve extension spindles; surface boxes; water meters (rotary piston type); stop valve keys; reinforced concrete castings; ferrules; sulphate of alumina and hydrated lime (for water purification purposes); lubricating oils. Documents from Engineer and Manager, Water Department, Town Hall, Stockport, Tenders by Jan. 11.

Stoke Newington.—Supply of materials for one year from April 1, 1961, as follows for B.C.: (1) Scavenger and leaf brooms; (2) artificial stone paving; (3) tarred slag macadam; (4) jin. granite chippings; (5) sand. ballast and shingle; (6) solid fuel supplies; (7) fuel oil supplies; (8) road tar containing 10 percent. bitumen; (9) reinstatement of trenches and repairs to hot-rolled asphalt carriageways. Documents from the Borough Engineer and Surveyor, Town Hall, Stoke Newington. N.16. Tenders by Jan. 6.

Stoke-on-Trent, Staffs.—Supply of approximately 800 tons, ex works, of best hand-picked lump lime and 200 Tygan plastic press cloths (No. 5092) for use at the several purification works in the city during the financial year 1961-1962 for City Council. Documents from the office of the City Sewage Engineer, Leek Road, Stoke-on-Trent. Tenders by Jan. 10.

*Stourbridge, Worcs.—Supply of materials for B.C. Tenders by Jan. 19.

Swansea.—Following for a period of 12 months from April 1, 1961, for B.C.: Bituminous macadam; bricks; cement; concrete (ready mixed); concrete kerb; concrete materials; electric cable (street lighting); electric lamps; engineering supplies (bolts, packing, etc.); granite chippings; gullies and frames, haulage, motor (daywork); haulage, motor (tonnage rates); iron and steel (bar, sheet and tu

Swansea. Tenders by Jan. 23.

*Watford, Herts.—Supply of salt for water softening plant for Water Department. Tenders by Jan. 13.

*Wigan, Lancs.—Supply of materials for B.C. Tenders by Feb. 6.

Wimbledon, Surrey.—Supply of the following material for the year ending March 31, 1962, for Wandle Valley Joint Sewerage Board: (1) Lime for sludge pressing; (2) press cloth; (3) copperas. Documents from the Surveyor to the Board, Sewerage Purification Works, Byegrove Road, Colliers Wood, S.W.19. Tenders by Jan. 14.

PLANT AND MECHANICAL TRANSPORT

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Dundee, Angus.—Supply and delivery of one diesel engine crawler tractor and angle/buildozer, with cab, suitable for work on controlled refuse tip, for City Council. Sealed tenders, endorsed Cleansing-Buildozer, to the Town Clerk, City Chambers, Dundee, by Jan. 30.

*Heston and Isleworth, Middx.—Supply of plant for B.C. Tenders by Jan. 23.

*Sowerby Bridge, Yorks.—Refuse collecting vehicle for U.D.C. Tenders by Jan. 11.

West Ham, Essex.—Supply of one new mobile compressors, rotary or reciprocating type, diesel engine for B.C. The following offered in part exchange two portable Climax compressors. Documents from the Borough Engineer, West Ham Town Hall, Stratford, E.15. Tenders by Jan. 13,

PLAYING FIELDS, PARKS, ETC.

Buckinghamshire.—Preparation of playing fields and grounds in Burnham and Wexham for Co. E.C. Applications to the Chief Education Officer, County Offices, Aylesbury, by Jan. 4. Tenders by Feb. 6.

*Lancashire.—Construction of tennis courts for C.C. Tenders by Jan. 11.

ROADS, BRIDGES AND SITE WORKS

Antrim.—Laying two-coat and single-coat asphalt covering an area of approximately 31,000 sq. yd. of carriageway and footpaths, together with kerbing and other incidental works on trunk road T.3, between Belfast borough boundary at Balmoral and Black's Road, Dunmurry, for C.C. Documents from County Surveyor's Office, County Courthouse, Crumlin Road, Belfast. Deposit £2 2s. Tenders by Jan. 20.

Atcham, Salop.—Construction of an estate service road at Caradoc View, Hanwood, for R.D.C. Documents from the Engineer and Sur-veyor, 24 St. John's Hill, Shrewsbury. Tenders

R.D.C. Documents from the Engineer and Surveyor, 24 St. John's Hill, Shrewsbury. Tenders by Jan. 6.

Basingstoke, Hants. — Construction of approximately 650 lin, yd. of kerbing, 2.122 sq. yd. of carriageway construction (hardcore/macadam), 1.477 sq. yd. of footpath construction, gullies, soakaways and other ancillary works at Darlington Road, for B.C. Documents from the Borough Surveyor, Municipal Buildings, Basingstoke. Deposit £2 2s, Tenders by Jan. 5.

Belfast.—Construction of reinforced concrete foundations and basement at proposed College of Art, York Street, for City Council. Documents from City Architect's Department. 40 Academy Street, Belfast. 1. Deposit £5. Tenders by Feb. 2.

Belfast.—Construction of roads, sewers and ancillary works at New Barnsley estate extension for City Council. Documents from the City Architect's Department (Housing Section), Townsend House, 97 Townsend Street, Belfast, 13. Deposit £5, cheques payable to Corporation. Tenders by Jan. 10.

Blackpool, Lancs.—Extensions of Moor Park Avenue and Collins Avenue for B.C. comprising construction of approximately 500yd, of carriageway, including the laying of channel, kerb and concrete foundation for kerb. The work includes the laying of approximately 24 lin. yd. of 9in. and 320 lin. yd. of 15in. concrete pipe, together with the provision of manholes and ancillary works. Documents from Arthur Hamilton. borough surveyor, P.O. Box 17, Municipal Offices, Blackpool. Deposit £2 Tenders by Jan. 11.

*Bury St. Edmunds, Suffolk.—Construction of car park for B.C. Deposit £2 S. Tenders

Jan. 11.
*Bury St. Edmunds, Suffolk.—Construction of car park for B.C. Deposit £2 2s. Tenders by Jan. 31.

Jan. 11.

*Bury St. Edmunds, Suffolk.—Construction of car park for B.C. Deposit £2 2s. Tenders by Jan. 31.

*Coulsdon and Purley, Surrey.—Private street improvement works for U.D.C. Deposit £3 3s. Tenders by Jan. 12.

Deben, Suffolk. — Following for R.D.C.: Construction of approximately 489 yd super. of carriageway and incidental works at the estate road off Felixtowe Road, Martlesham, and construction of approximately 457 super. of carriageway and incidental works at St. Mary's Avenue, Kirton. Application to the Engineer and Surveyor, Council Offices, Melton Hall, Woodbridge, Deposit £2 2s. each. Tenders by Jan. 9.

Doncaster, Yorks.—Construction of roads and sewers. Cantley estate, stage 5b, contract 25, for B.C. The proposed works comprise the construction of approximately 3,514 lin. yd. of soil and surface water sewers 6in. to 21in. diameter, 4,835 lin. yd. of kerb. 15,180 sq. yd. of 6in. broken stone carriageway foundations and coated macadam surfacing, together with brick manholes. gullies and ancillary works. Documents from the Borough Surveyor, 2 Priory Place, Doncaster. Deposit £3 3s. Tenders by Jan. 16.

East Riding.—Construction of a bridge. together with approaches, carrying the Hull-Selby trunk road over the Hull and Selby Railway at Cliffe, 3½ miles east of Selby for C.C. The works consist of embankments involving approximately 16,000 cu. yd. of imported filling, 500 lin. yd. of single carriageway, including drainage and kerbing, and the construction of a 36ft. wide bridge of approximately 45ft. skew span with bored piles, brick-faced mass concrete abutments with wing walls, with a concrete-cased steel deck. Documents from the County Surveyor, County Hall, Beverley. Deposit £7 (cheaues payable to C.C.). Plans seen at the Trunk Roads Office of the County Surveyor. Westminster Bank Chambers, Lairgate. Beverley. Tenders by Feb. 6.

Freebridge Lynn, Norfolk.—Pentney housing site—roads, fencing and sewage disposal works for R.D.C., including the following: (a) 100 lin. yd. chain link fencing, (b) 650 l

surfacing at Mytenett for U.B.C. Tenedia B. Jan. 21.

Liskeard, Corn. — Following works for R.D.C.: (a) Surfacing of roadway, Tremar—making-up existing roadway with tarmacadam, comprising approximately 400 sq. yd. together with all necessary kerbing and retaining walls as access to the council's bungalows now being erected; (b) public conveniences—The Ouay, Polperro; Fishna Bridge, Polperro; The Ouay, Polrvan—works of alteration. Internal alterations for provision of turnstile system of entry, and in one case, tiling of the internal walls. Documents from the Surveyor, Council

Offices, Luxstowe House, Liskeard. Tenders by Jan. 12.

Offices, Luxstowe House, Liskeard. Tenders by Jan. 12.

Liverpool.—Regrading, draining and paving of two sites, St. Paul's C.E. Primary School, Byles Street, to provide extensions to play-grounds, for City Council. Documents from City Engineer and Surveyor, Municipal Buildings, Liverpool, 2. Tenders by Jan. 5.

Loughborough, Leics.—Resurfacing of approximately 12,000 sq. yd. of carriageway on trunk road A6, within the borough, with linthickness of hot rolled asphalt, the work to include the burning and planing of the existing surface for B.C. Deposit £2 2s. Tenders by Jan. 16.

thickness of hot rolled asphalt, the work to include the burning and planing of the existing surface for B.C. Deposit £2 2s. Tenders by Jan. 16.

*Midhurst, Sussex.—Construction of car park and sewer for R.D.C. Deposit £2 2s. Tenders by Jan. 31.

Newcastle-under-Lyme, Staffs.—Making-up of the following streets for B.C.: (1) High-field Avenue (part)—approximately 1.640 sq. yd. of carriageway excavation, foundation and two coats macadam, the re-laying of 435 lin. yd. of kerb, and other ancillary works; (2) Holden Avenue—approximately 930 sq. yd. of carriageway excavation, foundation and two coats macadam, the re-laying of 240 lin. yd. of kerb, and other ancillary works; (3) Pitfield Avenue—approximately 1.610 sq. yd. of carriageway excavation, foundation and two coats macadam, the relaying of 380 lin. yd. of kerb, and other ancillary works. Documents from the office of the Borough Engineer and Surveyor, Lancaster Building, High Street, Newcastle, Staffs. Tenders by Jan. 9.

*Newcastle upon Tyne.—Scotswood suspension bridge repair for City Council. Deposit £5. Tenders by Jan. 23.

Norwich, Norfolk.—Excavation and refilling of trenches for water mains and reinstatement of surfaces in the parishes of Plumstead and Postwick for City Council. Documents from the Engineer and Manager. Water Department, City Hall, Norwich. NOR 01A. Tenders by Jan. 20.

Portsmouth.—Wymering industrial site—extension of service road for City Council. The works include 2,300 sq. yd. of concrete carriageway, gullies and connections, and small quantities of footways and verges. Documents from the City Engineer, Municipal Offices, 1 Clarence Parade, Portsmouth. Deposit £2. Tenders by Jan. 21.

*Richmond, Surrey.—Annual maintenance contracts for B.C. Tenders by Jan. 19.

*Richmond, Surrey.—Annual maintenance contracts for B.C. Tenders by Jan. 19.

*Richmond, Surrey.—Annual maintenance contracts for B.C. Tenders by Jan. 19.

*Richmond, Surrey.—Council Offices, Seaton Delaval, Whitley Bay. Tenders by Jan. 14.

*Slough, Bucks.—Roads and sewers, Pa

Documents from the Surveyor, Council Offices, Seaton Delaval, Whitley Bay. Tenders by Jan. 14.

*Slough, Bucks.—Roads and sewers. Parlaunt Park housing estate, for B.C. Deposit £2 2s. Tenders by Jan. 23.

Thorne, Yorks.—Making-up of the undermentioned private streets, together with the laying of the necessary surface water sewers for R.D.C.: (1) St. Mary's Road, Dunsville, 348yd.; (2) St. George's Avenue, Dunsville, 133yd.; (3) St. James's Avenue, Dunsville, 143yd.; (4) Kenneth Avenue, Dunsville 136yd.; (5) laying of surface water sewers in the abovementioned street; (6) Hawthorne Avenue, Dunsville, 236vd.; (7) Greens Road, Dunsville, 241yd.; (8) Mile End Avenue, Hatfield, 137yd. Documents from P.O. Box 4, Council Offices, Thorne, Doncaster, Deposit £1 1s. each or £4 4s. for all eight, Tenders by Jan. 4.

Torquay, Devon.—Construction of approximately 120 lin. yd, of carriageway and 1,250 sq. yd. of concrete promenade together with the reconstruction of steps and incidental works at Oddicombe Beach, for B.C. Documents from the office of the Borough Engineer, Town Hall, Torquay, Tenders by Jan. 16.

*Trowbridge, Wilts.—Road improvement at Frome Road for U.D.C. Deposit £2 2s.

ments from the office of the Borough Engineer. Town Hall, Torquay. Tenders by Jan. 16.

*Trowbridge, Wilts.—Road improvement at Frome Road, for U.D.C. Deposit £2 2s. Tenders by Jan. 16.

Walthamstow, Essex.—Heating and planing carriageway by smokeless process, area approximately 14,000 sq. yd. in Chingford Lane, Woodford Green for B.C. Documents from the Borough Engineer and Surveyor, Town Hall, Walthamstow, E.17. Deposit £2 2s. Tenders by Jan. 3.

Walthamstow, Essex.—Resurfacing the carriageway with dense bitumen macadam, area approximately 14,000 sq. yd. in Chingford Lane, Woodford Green, for B.C. Documents from the Borough Engineer and Surveyor, Town Hall, Walthamstow, E.17. Deposit £2 2s. Tenders by Jan. 3.

West Riding.—Laying of red shale vehicle road, forming of concrete baths and crossover and provision of chain link fencing at Aston Swallownest Primary School for C.C. Applications to the Divisional Architect, Planet Road, Adwick-le-Street, near Doncaster. Tenders by Jan. 9.

Widnes, Lancs.—Ditton neighbourhood unit, Abbey Road (Contract 394), for B.C., including the laying of approximately 115 lin. yd. of 9in. s.g.w. sewer and the construction of approximately 580 sq. yd. of reinforced concrete carriageways. Documents from the Borough Engineer, Town Hall, Widnes. Deposit £2 2s. Tenders by Jan. 4.

SEWERAGE, SEWAGE AND REFUSE DISPOSAL

*Barnet, Herts.—Barnet Gate Lane, soil and surface water sewer for U.D.C. Tenders by lan. 18.

surface water sewer for U.D.C. Tenders by Jan. 18.

*Bromley, Kent.—Heathfield Road, surface water sewer for B.C. Tenders by Jan. 10.

*Cheltenham, Glos.—Hayden sewage works extensions, stage II for B.C. Deposit £15 15s. Tenders by Feb. 13.

*Cambridgeshire.— Surface water sewers, contract 6019, for C.C. Tenders by Jan. 14.

*Chelmsford, Essex.— Danbury and other parishes sewerage scheme for R.D.C. Deposit £5. Tenders by Feb. 7.

*Halifax, Yorks.—Supply of concrete pipes for B.C. Deposit £1. Tenders by Jan. 13.

Hartismere, Suffolk.—Following work for R.D.C.; Botesdale—drains, water supplies and the installation of w.c.s to 42 existing houses; Rickinghall Superior—drains, water supplies and the installation of w.c.s to 14 existing houses. Documents from the Engineer and Surveyor's Department, Lambeth Street, Eye, Suffolk, Deposit £2 2s. Tenders by Jan. 13.

Hemel Hempstead, Herts.—Supply of sewer cleansing equipment for B.C. Documents from A. H. Turner, borough engineer, High Street, Hemel Hempstead. Tenders by Jan. 9.

Hillsborough, Down.—Electrical installation in connection with the erection of a sewage disposal works at Newtownbreda for R.D.C. Documents from McCandless and Barton, consulting engineers. 6 Murray Street, Belfast, 1. Deposit £3 3s. Tenders by Jan. 9.

Malton. Yorks, — Construction of the following for R.D.C. 2,500yd. of 6in. diameter s.g.w. or concrete tube sewer; 500yd. of 4in. and 6in. s.g.w. pipe in house connections: two sludge drying beds, in the village of Bulmer, together with the construction of manholes and other ancillary works. Documents from Thomas Hicks, clerk to the Council, R.D.C. Offices. Welham Road, Norton, Malton, Yorks, Deposit £2 2s. Plans also seen at the office of D. H. Moore, consulting engineer, 12 Valley Bridge Parade, Scarborough, Tenders by Jan. 19.

Middlesex.—East Middlesex main drainage, contract EMR3, for C.C. including the construction of the following buildings at Rammey Marsh sludge disposal works, near Enfield Lock: (1) pumping station super-structure, 78ft.

STREET LIGHTING

Doncaster, Yorks.—Supply and installation of a total of 97 street lighting units located as follows for R.D.C.: (i) Forty-four units on route A.I (Great North Road). Rossington Bridge; (ii) 53 units on route A.18 (Thorne Road). Edenthoroe. Each lighting unit will consist of a totally enclosed lantern equipped with a 140-watt sodium lamp, mounted on a 25ft. pre-stressed concrete column, together with all necessary auxiliary equipment. Documents from the Surveyor, Council Offices. Nether Hall, Doncaster. Tenders by Jan. 13.

West Lothian.—Street lighting on trunk

Nether Hall, Doncaster. Tenders by Jan. 13.

West Lothian.—Street lighting on trunk road A.8 in the vicinity of Bangour Hospital. for C.C., including supply and erection of 25 200-watt "long" type, enclosed side entry sodium lanterns mounted at 33ft, on tubular steel columns having an outreach of 10ft, 6in. Documents from the County Electrical Manager, 212 High Street, Linlithgow, West Lothian, Tenders by Jan. 14.

AWARDS

BUILDING AND DECORATING (See also Housing Schemes,

Bangor, Caerns.—Provision of kitchens at 1.
1a, 2, 3, 4 and 5 Ael-y-Bryn for City
Council—A. G. Williams, Glan Aber,
Llanddona, near Beaumaris, Anglesey.
£1,984.

Bourne, Cambs.—Provision of toilets for patients and visitors at Bourne Isolation Hospital, for the East Anglian Regional Hospital Board—R. Wallace, The Chase, Leverington Road, Wisbech, £765 (recom-

mended).

Bradford, Yorks. — Following for City Council: Erection of new school meals scullery and furniture store at Lidget Green Junior School—Stanley Terry, Bradford, £1.585; supply and erection of storage shed at Esholt sewage works.—Quayside Engineering Co., Ltd., 11 Brougham Street, Quayside, Stockton-on-Tees, £995; demolition of part of the fight shed, overhauling and re-hanging doors — Wescol Construction Co., Ltd., Lumbrook Mills, Westercroft Lane, Northowram, £763; construction of a health service clinic and consulting suites at Holme Wood housing estate—M. Booth and Sons, Ltd., Akam Road, Bradford, 1, £38.208 (recommended).

Bridport, Dorset.—Repairs and renovations at mended).

Bridport, Dorset.—Repairs and renovations at 3 Alexandra Road for B.C.—W. T. C. Mudford, 15 Parsonage Road, North Alling-ton, Bridport, 4956 (recommended).

Mudiora, 10 Parsonage Road, North Allington, Bridport, £956 (recommended).

Cambridge.—Extension to Hollerith building at 24 Carlyle Road, for the East Anglian Regional Hospital Board—Monkman (Cambridge), Ltd., Crossways, Oakington, Cambridge, £1,742 (recommended).

Carmarthenshire.—Following for C.C. W. T. Lloyd, county architect: Erection of a secondary modern school at Llanstephan Road, Carmarthen—Bennett Bros., Ltd., Carlton Terrace, Swansea; provision of a Medway standard classroom unit and alterations to the existing premises at the Secondary Modern School, Llandybie—J. Morris and Sons, Station Road, Llandilo, and Medway Buildings and Supplies, Ltd., Rochester, Kent; erection of new sanitary offices, sewage purification plant and drainage at Cilycwm V.C. School, near Llandovery—J. Morris and Sons, Station Road, Llandilo; erection of one additional

classroom with cloakroom consisting of Medway Standard Prefabricated Hut Units, and the construction of the necessary foundations, paths and appurtenant siteworks, at Tremoilet V.C. School—Howells and Thomas, Llanstephan Road, Carmarthen. Work commencing Jan.

Work commencing Jan.

Chelsea.—Provision of a cloakroom block at Town Hall, for B.C.—W. J. Alford, Ltd., 75a Stonhouse Street, S.W.4, £2.091 (recommended); Collis and Co., Ltd., £2,176; Rawlings Bros., Ltd., £2,369; William Willett, Ltd., £2,388.

Cromer, Norfolk.—Extension to boiler room at Cromer and District Hospital, for the East Anglian Regional Hospital Board—Thompson and Grimble, 5 Overstrand Road, Cromer, £560 (recommended).

Croydon, Surrey.—Erection of 5-storey

Croydon, Surrey.—Erection of 5-storey offices at Fell Road—Wates, Ltd., 1258 London Road, London, S.W.16. Estimated cost £400,000. Work about to commence.

Exeter. — Construction of the kiosk shop at Eastgate for City Council—Benbow and Co. (Modern Shopfitters), Ltd., 6 Petitor Road, St. Marychurch, Torquay, £1,182 (recommended).

St. Marychurch. Torquay, £1,182 (recommended).

Folkestone, Kent. — Rebuilding, "The Railway Bell" public house at 209-213 Dover Road for Ind Coope (London), Ltd.—C. Jenner and Son, Ltd., Alexandra Works, 5, 7 and 9 Bouverie Road East, Folkestone, estimated cost £20,000. Riley and Glanfield, architects, 6 Raymond Buildings, Gray's Inn, London, W.C.1, and Fleetwood Eversden and Partners, quantity surveyors, 40 Doughty Street, London, W.C.1.

Gloucestershire, — Extensions to the Gloucestershire and Sons, Ltd., 58 Broad Street, Staple Hill, Bristol. £243,258.

Hendon, Middx.—Following for B.C.: Provision of a new refreshment kiosk at Montrose playing fields—Direct Labour (recommended). Estimated cost £1,000.

Alterations to dressing rooms at Woodfield Park—Direct Labour (recommended). Estimated cost £1,000.

Hereford.—Provision of new office accommodation at the Cattle Market for City Council—Bayley Bros. (Hereford), Ltd., Cotterell Street, Hereford, £6,862 (recommended).

Hull.—Piling work for extension of store of

Hull.—Piling work for extension of store of Thornton-Varley, Ltd.—Holmpress Piles, Ltd., Leeds Road, Hull. Main contract to be placed shortly. Work commenced.

Ipswich, Suffolk.— Additional toilet accommodation at the Anglesea Road wing of Ipswich and East Suffolk Hospital, for the East Anglian Regional Hospital Board—J. F. King and Son, Ipswich, £1,474 (recommended).

mended).

Islington.—Following for B.C.—Repairs and conversion of (a) 13 Ellington Street, (b) 25 Plimsoll Road and (c) 34 Parkhurst Road—(a) Elsworthy, Ltd., 125 Park Road, N.W. 8, £2.478; (b) Goddard and Phillips, Ltd., 118a Highgate Road, N.W. 5, £1.960, and (c) Wallis and Stanley, Ltd., 256 Archway Road, N.6, £3.221; repairs, etc., at public conveniences and Sussex Way Depot—W. T. Ricketts and Sons, Ltd., 73 Southgate Road, London, N.1, £1.087 (recommended).

King's Lynn, Norfolk.-Construction of nev entrance canopy to casualty department and shelter for wheelchairs and trolleys at West Norfolk and King's Lynn Hospital, for the East Anglian Regional Hospital Board—R. W. Dye and Son, Ltd., South Gates, King's Lynn, £1,071 (recommended).

King's Lynn, £1,071 (recommended), ondon.—Erection of a nine-storey tower block of shops and flats and a three-storey block of shops and flats at 85-95 Lower Sloane Street and 102 Pimlico Road, London, S.W.1, for Cadogan Estates—William Willett (Contractors), Ltd., Sloane Square, London, S.W.1. Basil Hughes, architect. 6 Cadogan Mansions, S.W.1. John Farquharson and Partners, consulting engineers, 34 Queen Anne Street, W.1. Estimated cost £100,000. Piling commenced.

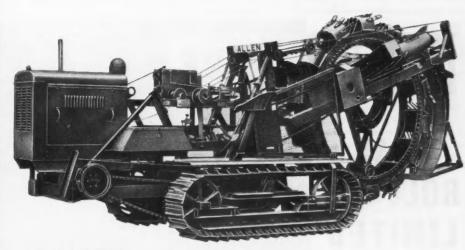
Lowestoft, Suffolk.—Construction of workshop and store for cylinders, coal and refuse at Lowestoft and North Suffolk Hospital, for the East Anglian Regional Hospital Board—D. H. Blewitt, 17 Milton Road, Lowestoft, £970 (recommended).

Road, Lowestoft, £970 (recommended).

Norwich.— Conversion of the former Cricketers' Arms in Red Lion Street into branch premises for the Westminster Bank, Ltd.—H, G. Wilkins and Son, West Pottergate, Norwich. Work commenced.

Norwich.—Alteration to female ward 8 on three floors at Hellesdon Hospital, for the East Anglian Regional Hospital Board—W. F. Pointer and Sons, Ltd., 86 Hotblack Road, Norwich, £23,057 (recommended).

Ossett, Yorks.—Erection of a block of 15 shop units for Shop Precincts, Ltd.—Arthur Gibbs and Son (Pudsey), Ltd., 44 Richard-



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shaw Lane, Pudsey, estimated cost £38,000. Illingworth, Son and Grisdale, architects, 15 Sunbridge Road, Bradford, 1; and E. I. Mills, quantity surveyors, 156-158 Swan Arcade, Bradford, 1. Work has commenced. Oxford.— Erection of an eight-storey block for teaching and research laboratories at the biochemistry department at South Parks Road for the University Chest—I. Longley and Co., Ltd., East Park. Crawley, Sussex, estimated cost £350,000 to £400,000. Murray, Ward and Partners, architects, 32 Wigmore Street, London, W.1; Northcroft, Neighbour and Nicholson, quantity surveyors, Victoria House, Southampton Row, London, W.C.1; Steensen, Varming and Mulcahy, consulting engineers, 146 New Cavendish Street, London, W.1, and Ove Arup and Partners, structural engineers, 8 Fitzroy Street, London, W.1. Work to commence end of this month.

tural engineers, 8 Fitzroy Street, London, W.I. Work to commence end of this month.

Peterborough.—Following at the Peterborough and District Memorial Hospital, for the East Anglian Regional Hospital Board: Sinking of trial boreholes on main hospital site—Legrand Adsco, Ltd., Southall, Middx., £659; erection of new cell and toilet blocks and boundary wall round Court House—Granville Building Co., Ltd., Russell Street, Peterborough, £13,419 (recommended).

Rugby, War.—Construction of a new depot building off Bilton Lane, Dunchurch, for R.D.C.—B.A.S.S. Engineers, Ltd., Leamington Spa, £9,325.

Southgate, Middx.—Conversion of the following properties for B.C.: 158 Maidstone Road, N.I.I., and 27 Parkway—A. Harston and Co. (Enfield), Ltd., 21 Queen Annes Place, Enfield, £1,474 and £1,304, respectively; 27 The Mall—H. Bradford and Sons, Ltd., 37 Shacklewell Lane, E.8, £2,117, 98 Selborne Road—A. G. Ellis, 156 Turkey Street, Enfield, £2,470; 62 Osborne Road—T. C. Firmin and Sons, Ltd., 106 Lancaster Road, Enfield, £1,343; 45 The Limes—W. V. Wall and Son, Ltd., 11 Park Road. N.8, £1,700 (recommended).

Stamford, Lincs.—Extension to pathological laboratory at the Stamford and Rutland Hospital, for the East Anglian Regional Hospital, for the East Anglian Regional Hospital Board—R. Carter and Son, Peterborough, £748 (recommended).

Stoke-on-Trent, Staffs. — Following for City Council: Erection of a new bowling pavilion, ladies' end gentlemen's toilets and store and a new tractor and implement store, workshops and messroom at Hanley Park—B. S. Phillips, Ltd., 123 Hanley Road. Sneyd Green, Stoke-on-Trent, £22,451; construction of shops and offices (incorporating ladies' conveniences) at

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Stafford Street-Tontine Street, Hanley—Direct Labour, £76,767 (recommended).

Walsall, Staffs.—Ground investigation on the site of the West Midlands Training College for B.C.—Ground Explorations, Ltd., 75 Uxbridge Road, London, W.5, £1,293 (recommended).

DEMOLITION

Barnsley, Yorks.— Demolition of the tower and making good at the Public Hall for B.C.—Redditt Bros., Ltd., Monument Field, Doncaster Road, Barnsley, £242 (recom-

Doncaster Road, Barnsley, £242 (recommended).

Bradford, Yorks.—Demolition of following for City Council: Houses and lock-up garages bounded by Westbrook Street. Nelson Square, Carlton Terrace and Carlton Street—B. and S. Demolition (T. Crompton), 2 Ash Street, Bradford, to pay Council £60 (recommended).

46 Vicar Lane—A. Ogden, and Son, Ltd., 40 Bondgate, Otley, £885; Stone Stile House and Cottage and 89-105 Holme Lane J. T. Whitfield, Halifax, £15 and £25, respectively (recommended).

Chester.—Demolition of 44 and 46 St. Anne Street for City Council—Engineers (Ruabon), Ltd., 45 Kings Street, Wrexham, £70 (recommended).

mended).

Hendon, Middx.ing of Burton -Demolition and rebuild-

mended).

Hendon, Middx. — Demolition and rebuilding of Burtonhole Cottages for B.C.—Gee, Walker and Slater, Ltd., 100 Park Lane, London, W.1, £5,194 (recommended).

Kidderminster, Worcs.—Demolition of properties in Hall Street for B.C.—E. Butterworth, Bolton, £100 (recommended).

Spenborough, Yorks.—Demolition of Central Chapel Cleckheaton, for B.C.—E. Heaton, Dewsbury.

Stoke-on-Trent, Staffs.—Demolition of (a) 242 warehouse and garage and 2 Nephew Street, Burslem; (b) The Cinderhill, Weston Coyney Road, Longton; (c) the Lord Nelson, Kingcross Street, Longlin; and (d) The Woolpack, Commerce Street, Longton, for City Council—G. H. Hughes and Son, Maclagen Street, Stoke-on-Trent—(a) £20, (b) £75, (c) £50, and (d) £50 (recommended).

Swinton and Pendlebury, Lanes.—Demolition of 2 to 24 Holland Street, Swinton, for B.C.—A. Connell, Moss Lane East, Manchester, 15, £58 (recommended).

ELECTRICAL

Barnsley, Yorks.—Installation of a two-way amplifier system of communication in old persons' dwellings to be erected at The Limes, Gawber Road, for B.C.—Smith Bros. (Caer Conan) Wholesale, Ltd., 1-5 Market Road. Doncaster, £680 (recommended).

Chester.—Electrical work required in 40 houses at Plas Newton estate for City Council—Engineering Service Installations, Ltd., 193 St. Marys Road, Liverpool, 19, £1,187 (recommended).

Halesworth, Suffolk.—Supply and installation of lift at Blythburgh and district Hospital, for the East Anglian Regional Hospital Board—Evans Lifts, Ltd., Prospect Works, Abbey Lane, Leicester, £3,040 (recommended).

Hendon, Middx.—Supply and installation of passenger and goods lifts for the flatted factory for B.C.—Marryat and Scott, Ltd., 40 Hatton Garden, London, E.C.1, £9,138 (recommended).

Middlesex.—Supply and installation of electrical equipment at Deephams (contract E.M.D.8, sub-contract 39) for C.C.—City Electrical Co., Ltd., Emerald Street, London, W.C.1, £54,177 (recommended).

Street, London, W.C.I, £54,17/ (recommended).

Swinton and Pendlebury, Lancs.—Electrical installations in 76 dwellings at Clifton estate 2 (scheme 61) for B.C.—William Lee, 77 Market Street, Atherton, £2,422 (recommended).

FENCING

fencing

forsham, Sussex. — Fencing, Kings Road
industrial site, Horsham, for U.D.C., which
comprises the erection of 670yd. of 6ft. high
chain link fencing—J. B. Corrie (Flextella),
Ltd., Petersfield, Hants., £768 (accepted);
Boulton and Paul, Ltd., £772; Gerald
Gilmer, Ltd., £803; S. Light, £830; A. H.
Green, £832; Peerless Fence and Products,
Ltd., £805; and Astolat Co., Ltd., £920.
Work commencing Jan.

outhpate, Middx.—Provision of additional Horsham.

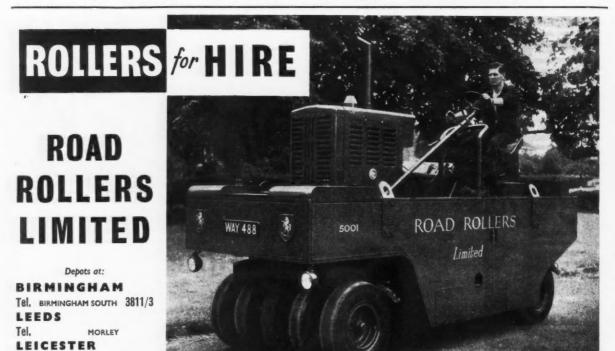
Southgate, Middx.—Provision of additional boundary fencing at Highview Gardens for B.C.—Wates, Ltd., 1,258 London Road. London, S.W.16, £896 (recommended).

GAS AND WATER SUPPLY

GAS AND WATER SUPPLY

Amesbury, Wilts.—Regional water supply, contract 12, Avon Valley mains for R.D.C., comprising the laying of approximately 4½ miles of 6in. diameter spun-iron water mains, approximately seven miles of smaller diameter mains, and incidental works. Lemon and Blizard, consulting engineers, Telford House, Hulse Road, Southampton — Bridgwater Bros., Ltd., 97 East Street, Epsom, Surrey. Work commencing January.

Barnsley, Yorks. — Construction of the remainder of Mossley and Cross Royd service reservoirs for B.C. — Ruddock and Meighan, Ltd., Barugh Green, Barnsley, £70,121 (recommended).



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Halesworth, Suffolk.—Construction of lift well and water tower at Blythburgh Hospital, for the East Anglian Regional Hospital Board—Cooper and Denny, Reydon, Southwold, £2,380 (recommended).

Holt. Norfolk.—Construction of water tower to replace tanks at Kelling Children's Hospital, for the East Anglian Regional Hospital Board—Barrett and Wright, Ltd., la St. Miles Alley, Norwich, £2,673 (recommended).

mended). orwich.—Supply and erection of water tower and tanks at St. Andrew's Hospital, for the East Anglian Regional Hospital Board—Braithwaite and Co., Ltd., Great Bookham, £3,747 (recommended). Norwich.

HEATING AND VENTILATING

Barnsley, Yorks.—Installation of electric floor heating equipment at 12 old persons' dwell-ings at Gawber Road for B.C.—Yorkshire Electricity Board, £80 per dwelling (recom-mended) mended).

mended).

Bury St. Edmunds, Suffolk.—Provision of additional meters for boiler plant at the West Suffolk General and St. Mary's Hospitals, for the East Anglian Regional Hospital Board—Ashwell and Nesbit, Ltd., Barkby Lane Works, Leicester (recommended). Estimated cost £1,314.

Cromer, Norfolk.—Supply and installation of oil-firing equipment for boiler plant at Fletcher Hospital, for the East Anglian Regional Hospital Board—Barrett and Wright, Ltd., la St. Miles Alley, Norwich, £1,588 (recommended).

HOUSING SCHEMES

Alton, Hants.—Ninety-two houses at Manor estate for U.D.C.—Gregory Housing, Ltd., 21 Farncombe Road, Worthing, Sussex, £119.574 (recommended, subject to Ministry

approval).

Barnsley. Yorks.—Twenty-eight dwellings at St. Helens housing site (contract S.H.5) for B.C.—T. H. Watford, Ltd., 40 Lundhill Road, Wombwell, £32.390 (recommended).

Chatham, Kent.—Erection of flats in Hardstown redevelopment area for B.C.—Peak Construction, Liverpool, Ltd., Knight Road, Strood, Rochester, £185,000.

Daventry, Northants.—Following for R.D.C. H. Bonsor, engineer and surveyor: Ten bungalows at Welton—Adkins and Cooper, Ltd., Staverton, £13,558 (accepted); Haynes and Sons (Daventry), Ltd., £13,758;

DaW291260C)

Branson and Jones, £14,074; two bungalows at Crick—Haynes and Sons (Daventry), Ltd., Daventry, £2,782 (accepted); Adkins and Cooper, Ltd., £2,880; Kirby Bros., £2,995; J. E. Talbot, £3,454.

Halesworth, Suffolk.—Two additional staff houses at Risbridge Home, Kedington, for the East Anglian Regional Hospital Board—T. J. Archer and Co., Ltd., Great Yeldham, £4,017 (recommended negotiated tender).

Haverfordwest, Pembs.—Following for B.C.:
(a) Two pairs of bungalows and appurtenant works at St. David's Road; (b) four pairs of bungalows and appurtenant works at Jury Lane. J. B. Hemingway, borough surveyor—(a) W. George, Morgans Terrace, Haverfordwest, £6,003; and (b) J. Ivor Jones (Johnston), Ltd., Johnston, Haverfordwest, £12,673. Work to commence Feb. 1.

Newcastle upon Tyne.—Following for City Council: 180 flats in two 15-storey blocks and 44 garages at Longbenton estate unit 4—Leslie and Co., Ltd., Peel Street, Kensington, London, W.8, £409,085 (recommended, subject to Ministry approval). Site investigation work for scheme—Direct Labour (recommended). Estimated cost £1,200.

Norwich.—House for senior medical officer at St. Andrew's Hospital, Thorpe, for the East Anglian Regional Hospital Board—R. G. Carter, Ltd., Drayton, Norwich, £4,285 (recommended).

Radcliffe, Lancs.—Ninety-eight dwellings in blocks of varying sizes and provision of three shops and an old people's common room at Chapelfield for B.C.—Unity Structures, Ltd., 5 Cromer Street, Londor, W.C.1 (subject to Ministry approval). Estimated cost £160,000.

Southgate, Middx.—Nine flats at Seafield Road, N.11, for B.C.—Tonwsend and Collins, Ltd., 129 Goat Lane, Enfield, £23,548 (recommended).

Walsall, £28,002 (recommended, subject to Ministry approval).

MATERIALS AND SUPPLIES

Barnsley, Yorks.—Supply of mixed chippings

MATERIALS AND SUPPLIES

Barnsley, Yorks. — Supply of mixed chippings for 1960-61 roadworks programme for B.C.:—Hughes Bros. (Derbyshire Granite). Ltd., Waterswallows Quarry, Buxton, Derbys, 33s. 6d. and 35s. 6d. per ton (recommended).

Newcastle upon Tyne.—Supply of 1,300 gal-vanised mild steel dustbins for six months, commencing Jan. 1, 1961, for City Council —Freeborns (Lemington), Ltd., Newcastle upon Tyne, £2,099 (recommended).

PLANT AND MECHANICAL TRANSPORT

Barnsley, Yorks.—Supply of one Massey-Ferguson tractor and equipment for B.C.— S. Wilson and Son, Ltd., 70 Owlerton Green, Sheffield, 6, £2.096 (recommended).

Gosport, Hants.—Supply of a 4-ton Bedford long-wheeled base tipping lorry (diesel engine) for B.C.—Righton and Bennett, Ltd., Stoke Road, Gosport, £1,225 (recommended).

Hereford.—Supply of a Miles Verro road sweeper for City Council—Alfred Miles, Ltd., Brockworth, Gloucester, £1,316 (recommended).

Southgate, Middx.-Provision of a convey for the paper baling and sorting plant for B.C.—British Wedge Wire Co., Ltd., 52 Bounds Green Road, N.11, £935 (recommended)

B.C.—Brillian
Bounds Green Road, N.1.,
Bounds Green Road, N.1.,
mended).
Southgate, Middx.—Layout of grounds at
Limes Avenue/Cross Road and Woodland
Road housing estates for B.C.—Direct
Labour (recommended). Estimated cost

PLAYING FIELDS, PARKS, ETC.

Farnworth, Lancs.—Development of Harper Green playing fields for B.C.—Maxwell M. Hart (Glasgow), Ltd., 74 Corporation Street, Manchester, 4.

Hereford.—Construction of a cinder track on the south-east area of the racecourse for City Council—Maxwell M. Hart (Glasgow), Ltd., Manchester, £12,768 (recommended).

ROADS, BRIDGES AND SITE WORKS

Barnsley, Yorks.—Heating and planing work for 1960-61 roadworks programme for B.C. —W. and J. Glossop, Ltd., Amisfield House, Whitehall Road, Halifax (recommended).

Barrow-on-Soar, Leics.—Roadworks at Mount-sorrell for R.D.C. J. Lilley, surveyor— Reliable Roads (Shepshed), Ltd., Shepshed, Loughborough.

Bradford, Yorks.—Following for City Council: Extensions of playground at Drummond Secondary School—Ibmac, Ltd., 36 Sun-bridge Road, Bradford, 1, £900; construc-



tion of footpaths, etc., at Holme Wood housing estate, third section, parts III and IV—A. E. Morris (Yorkshire), Ltd., Russell Street Chambers, Bingley, £14,427 and £8,776, respectively (recommended).

Street Chambers, Bingley, £14,427 and £8,776, respectively (recommended).

Chester,—Improvement of Vicars Lane, for City Council—Wm. Bradshaw (Contractors), Ltd., Poulton Road, Wallasey, £11,500 (recommended).

Crawley, Sussex.—A23 trunk road improvement, junction of Manor Royal and Martyrs Avenue for U.D.C., consisting of a short length of dual carriageway and preparatory work for a traffic signal system, together with clearance, accommodation, and ancillary works—Kaymat, Ltd., North Heath, Horsham, £24,280.

Denholme, Yorks.—Construction of the following private streets for U.D.C.: Parkinson Road, Buck Street, Back Buck Street, Knowles Street, Stradmore Road, Milton Street, Albion Street, Albion Street (part 2). School Street, Clapham Street, area bounded by Main Road. Buck Street and School Street—M. M. McEvoy and Son, Ltd., 50 Claremont Grove, Wrose, Shipley, £6,968 (accepted); Ibmac, Ltd., £7,771; A. E. Morris (Yorkshire), Ltd., £7,771; A. E. Morris (Yorkshire), Ltd., £7,149. Work expected to commence Feb.

Gosport, Hants.—Construction of new Browndown Road and roundabout for B.C.—Warings (Contractors), Ltd., London Road, Portsmouth, £33,124 (recommended, subject to M.T. and C.C. approval).

Hendon, Middx.—Surfacing of (a) car park and access road and (b) land added to the car park site at the market for B.C.—Neuchatel Asphalte (Contracting), Ltd., Asphalte House, Palace Street, London, S.W.I. (a) £1,016 and (b) £650 (recommended).

S.W.l, (a) £1,016 and (b) £650 (recommended).

Hereford.—Construction of subway to provide pedestrian access between Newton Farm and Redhill estates for British Railways (Western Region)—Fairwater Construction, Ltd., Cardiff, £2,826 (subject to Ministry approved). approval).

Ltd., Cardiff, £2.826 (subject to Ministry approval).

Loughborough, Leics.—Construction of road. sewers and general drainage work on Model—Farm estate for Wm. Corah and Son, Ltd.—Reliable Roads (Shepshed). Ltd., Shepshed, Loughborough.

Middlesex.—Diversion of St. Albans Road in connection with construction of South Mimms By-pass, for C.C.—John Laing and Son, Ltd., Mill Hill, London, N.W.7 (recommended extension of contract, subject to M.T. approval). Estimated cost £30,000.

Newcastle upon Tyne.—Remedial works to certain streets at Longbenton housing estate, unit 4, for City Council—Direct Labour (recommended). Estimated cost £2,000.

Nuneaton, War.—B.C. recommended to pre-pare scheme for the provision of a service road fronting the properties of Jacques, Ltd., and Finn Shoes, Ltd., in Weddington

Cosett, Yorks.—Making-up of Belgrave Street, Belgrave Avenue, Lionel Street, Lime Street, Hilda Street, Audrey Street and King Street, for B.C.—Walter Small, 38 Duke of York Street, Wakefield, £10,381 (recommended, subject to Ministry approval).

Potters Bar, Middx.—Construction of the Cecil Road flyover over the Barnet By-pass for M.O.T. Leslie Turner and Partners, consulting engineers, 6 Grove Road, Sutton. Surrey—John Laing and Son, Ltd., Mill Hill, London, N.W.7, £92,587.

Spenborough, Yorks.—Making-up of Westroyd Avenue, Hunsworth, for B.C.—Wilsons (West Riding), Ltd., 526 Leeds Road, Thackley, Bradford, £4,788.

Walsall, Staffs.—Widening and improving Wallows Lane Bridge and approaches for B.C.—Egas, Ltd., Reddicap Industrial estate, Coleshill Road, Sutton Coldfield, £59,638 (recommended).

Woodbridge, Suffolk.—Construction of an approach road to female admission wards at St. Audry's Hospital, Melton, for the East Anglian Regional Hospital Board—Limmer and Trinidad Lake Asphalt Co., Ltd., 3 Cathedral Street, Norwich, £1,076 (recommended).

SEWERAGE, SEWAGE AND REFUSE DISPOSAL

Bradford, Yorks. — Culverting Bolton Beck between canal near the junction of Station Road and Canal Road and outfall of exist-culvert under Kings Road for City Council—Direct Labour (recommended). Estimated cost £2,465.

Norwich.—Connection of remaining cottages on estate at Hellesdon Hospital, for the East Anglian Regional Hospital Board—Bush Builders (Norwich), £td., Mile Cross Lane, Norwich, £1,322 (recommended).

Oakengate, Salop.—Laying 9in. foul sewer. Hollyhurst Road, Wrockwardine Wood, for U.D.C., comprising about 207 lin. vd. of 9in. glazed stomeware pipes together with ancillary works. H. Dickins, engineer and surveyor—Heston Bros., Holyhead Road, Oakengates, £851 (accepted); Geo., Wright and Co., £td., £1,488; Thomas D. Mulcair, £1,991. Work commencing January.

Nucarr, 21,991. Work commencing January.

Risca, Mon.—Construction of approximately 1,000yd. of 48in. diameter reinforced concrete surface water sewer, 850yd. of 15in. concrete foul sewer, and the tubing of a canal to provide two crossing places, together with ancillary works for U.D.C.—Willment Bros., Ltd., Crane Street, Ponty-

pool, Mon., £57,030 (accepted); J. E. Jones, Ltd., £62,619; Costelloe Plant Hire, £76,471; R. B. Fear, Ltd., £76,492; J. F. Dymond, £67,358.

STREET LIGHTING

Barnsley, Yorks.—Supply of group A lanterns for B.C.—Engineering and Lighting Equipment Co., Ltd., Sphere Works, St. Albans. Herts., £1,130 (recommended).

Exeter.—Supply of eight steel octagonal lamp columns, complete with lanterns and tubes (for High Street) for City Council—General Electrical Co., Ltd., Magnet House, Union Street, Plymouth, £111 each (recommended).

Harrow, Middx.—Provision of improved street lighting in Edgware Road from Greenway Gardens to London Road for B.C.—A.E.I. Lamp and Lighting Co., Ltd., 132 Long Acre, London, W.C.2, £5,989 (recommended).

Nuneaton, War.—Erection of street lighting equipment for B.C.—S. A. Inston and Co., Snows Yard, Foregate Street, Stafford, £515 (recommended).

Swinton and Pendlebury, Lancs.—Provision of concrete street lighting columns for Rake Lane and Moorside Road for B.C.—Stanton Ironworks Co., Ltd., near Nottingham, £1,380 (recommended).

GOVERNMENT CONTRACTS

Admiralty.—Particulars of contracts over £4,000 in value placed by Navy Works De-

E4,000 in value placed by Navy Works Department:
Fife: main office block—John Wight and Co. (Edinburgh), Ltd., Grangemouth.
War Department.—Contracts placed for the week ended Dec. 9:
Berkshire (Arborfield): building—J. M. Jones and Sons. Ltd., Maidenhead.
Breconshire (Sennybridge): painting and decorating—N. S. Long Ltd. Shrewsbury.
Hampshire (Worthy Down): building—William Bell and Sons (Andover). Ltd., Andover; (Tidworth): building—Thos. King and Sons (Builders). Ltd., Andover; (Aldershot): recreation ground—Kinman (Contractors), Ltd., London, W.6; (Tidworth): roadwork—James and Crockerell, Ltd., Salisbury.
Northumberland (Otterburn and Redesdale): miscellaneous—John Roxby Surtees, Ltd., Blackhill.
Surrey (Camberley): miscellaneous—Davies and Beatend All and Sons wiscellaneous—Davies and Beatend All and Sons Surtees.

Ltd., Blackhill.
Surrey (Camberlev): miscellaneous—
Davies and Rentowl (Aldershot). Ltd., St.

Warwickshire: electrical — Midlands Electricity Board, Stratford-on-Avon. Yorkshire: building—William Birch and Sons, Ltd., York.



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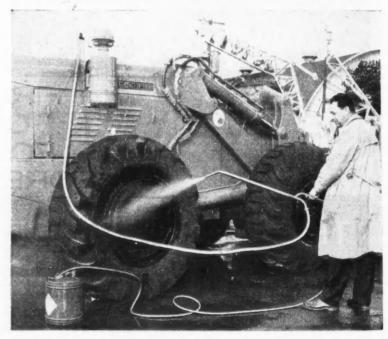
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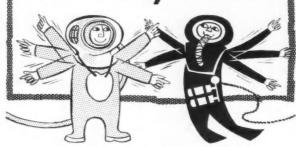


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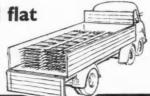
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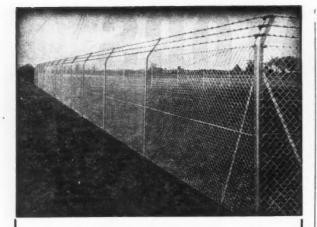
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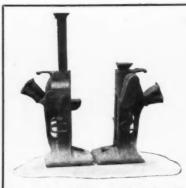
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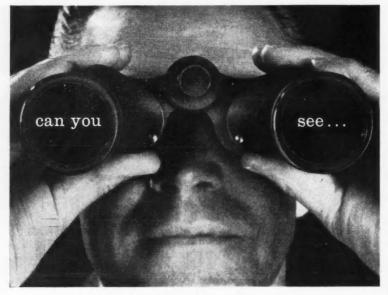
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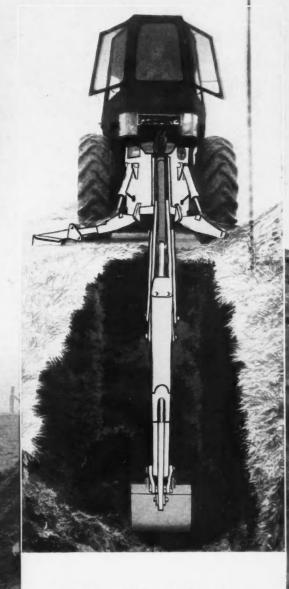
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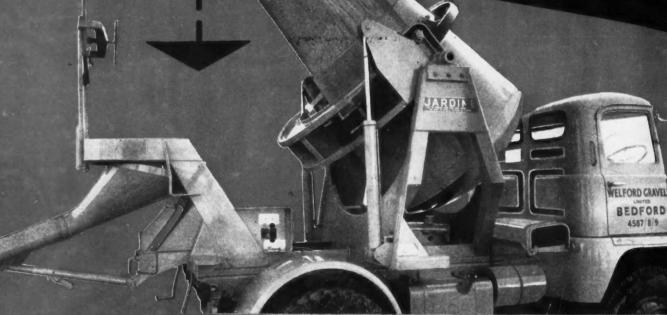
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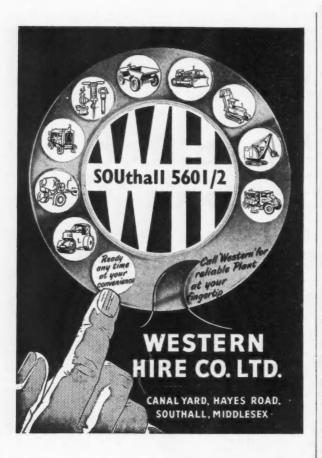
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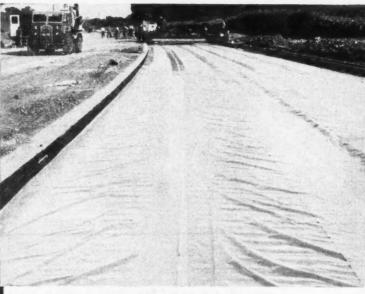
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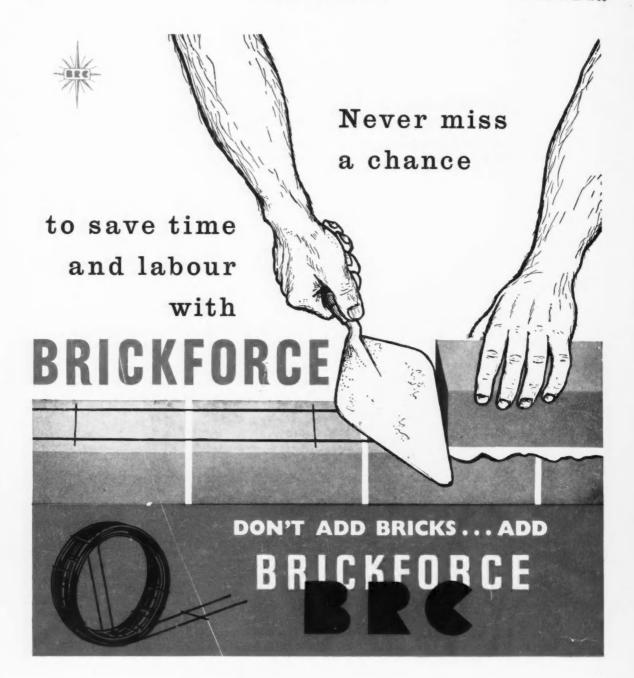
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